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**Convention of German Beekeepers, at
Darmstadt, September, 1868.**

[FURTHER AND FINAL SKETCH.]

On the morning of the second day, after a somewhat protracted preliminary discussion, it was decided by the Convention that, as compensation for making public his method of securing the pure fertilization of queen bees, the Rev. Mr. Köhler was entitled to receive the contributions of German beekeepers, deposited in the hands of the Editor of the *Bienenzeitung*. There was much difference of opinion among the members about this matter; and, though a large majority voted to authorize the payment, several protested strongly against the decision.

INTRODUCTION OF QUEENS.

The President then presented a letter from Mr. Uhle, communicating a process for the safe and speedy introduction of queen bees—which is substantially as follows:

Remove the queen of a colony, and feed the bees with diluted sugar water freshly scented with grated nutmeg. When the bees have freely partaken of this, dip the queen intended to be introduced into the scented solution, and immediately set her at liberty among the bees on a brood comb.

This should be done in the evening, just before dusk, because the bees are then naturally more disposed to accept an offered stranger than earlier in the day; and because the odor of the scented sugar water might attract robbers, if fed either in the morning or at noon.

The queen is to be dipped into the scented sugar water, primarily to impart the same smell which the bees have acquired from it; but likewise to tame and subdue her, so that she may not act wildly and try to escape when introduced among the bees, but be as it were constrained to accept the caresses and homage of her new subjects.

When introducing a queen, she should not be seized or held by her wings, but be grasped gently by the thorax with the thumb and fore-

finger. A queen held by the wings is apt to struggle and rush rashly among and over the bees when let go, and thus deporting herself as a stranger, she incurs the risk of being regarded and treated as such by the bees, and may be either mutilated or killed.

If the bees are in top-opening hives, the scented sugar water may be poured directly into the cells of one side of every partially empty comb, and the feeding and scenting of them may thus be promptly effected, even while the operator is searching for the queen intended to be removed.

This process of course admits of variations and modifications, such as will readily suggest themselves to intelligent beekeepers.

The fourth and fifth questions in regular course, were not taken up for discussion, as their proposers did not happen to be in attendance.

The sixth question, relating to the production of hermaphrodite bees, elicited some remarks from Prof. Leuckart and Mr. Dzierzon, which we pass over, as the subject is one of little importance in practical bee culture. The consideration of questions 7, 8, 9, 10, 11 and 12, was likewise postponed by the Convention, from want of time, or for other reasons, and the thirteenth question was taken up. This was an inquiry whether experience had demonstrated the superior value of movable combs in bee culture, and what influence the invention of the honey-emptying machine was likely to exert on this pursuit.

Dr. Pollman remarked that the first branch of the question could no longer be properly brought up for discussion in a general convention of beekeepers, inasmuch as bee culture had already reached a point in its progress far in advance of the position which it occupied when movable combs were introduced—and solely because of such introduction. The subject was no longer debateable, since we have on every hand the evidence of facts showing what can be accomplished by the use of such means, and what is unattainable without them.

The honey-emptying machine was highly extolled, as the complementary invention which placed within reach of the beekeeper a supply of empty combs, which the movable comb system

had made a desideratum; and as conducing to the further improvement and advancement of practical bee culture. The Rev. Mr. Köhler remarked that as the introduction of movable combs was an improvement in the ratio of *two to one*, so the invention of the honey-emptier might be considered as a further advance in the ratio of *four to one*.

A doubt having been expressed whether the machine could be used for extracting either candied honey, or the tough, viscid honey gathered from blooming heather, Dr. Pollman stated that this could be done, the difficulty having been overcome by a young man residing in his neighborhood, who immersed in tepid water the combs containing such honey, which then readily yielded to the action of the machine.

The inventor, Major Von Hruschka, being present, stated that he deemed it practicable to extract such honey by the machine without immersing the combs. He had made some recent improvements in his invention, and among them was an arrangement for warming the combs by the use of a spirit lamp, which enabled him to operate the machine in cool weather, and even in winter; and he doubted not that he could thus extract candied or viscid honey. By a further improvement now in progress, he expected to be able to dispense with the uncapping of the cells; and thus a troublesome and tedious operation would be got rid of. Major Von H was requested to report the results of his experiments in the *Bienenzeitung*; which he promised to do if he succeeded in rendering the uncapping unnecessary.

MAKING ARTIFICIAL COLONIES.

Question 14 regarded the best mode of making artificial colonies.

Dr. Pollman said he would communicate his process. "I have only one apiary," said he, "though I make artificial colonies. I usually make them with the queen. I take from a populous colony several combs with brood, on one of which the queen is seen. I transfer these to an empty hive, add some empty combs, and set the hive on the stand of the parent stock, removing the latter to some other part of the apiary. If this is done when the weather is fine and while the bees are flying briskly, we may feel assured that before night all the old bees will have left the parent hive and joined the new colony. This latter has the queen and a supply of empty combs in which she may at once proceed to deposit eggs and the old workers may forthwith store honey. The parent stock, too, is speedily recuperated from the brood it contains, which is maturing from day to day; and as in the best days of summer the queen lays from 2,000 to 3,000 eggs daily, a corresponding number of bees will issue daily, and thus speedily repopulate it, though all the old bees that leave fail to return. In the course of a week it will have recovered its normal number, and resume its pristine activity."

Mr. Hempel remarked that, with some modification, he regarded the process just described as one of the best in use. "I have," said he, "for some time past, made my artificial colonies

mainly in this manner, though for convenience I make some changes. I do not remove the parent hive, because in some cases that would be difficult, if not impracticable; but I remove all the combs. That is, I transfer all the combs from the parent stock to an empty hive, catching the queen and returning her to the old hive, and placing her among the bees remaining there. All the bees which had previously flown out, will speedily return to the parent hive, and, with those remaining there, soon constitute a strong swarm, which I am careful to furnish with plenty of worker guide comb. An artificial colony thus made will build as freely and rapidly as a natural one. The transferred stock, too, placed on a new stand in another part of the apiary, though the bees cease flying for a few days, will thrive satisfactorily, having a store of honey, and nearly all the young bees, with plenty of maturing brood from which its numbers will be rapidly reinforced. When old stocks thus treated are as populous as they should be to justify division, artificial colonies can in this way be best and most easily made, no second or distant apiary being required."

Mr. Dzierzon observed that it was hardly possible to say which is the most unexceptionable mode of making artificial colonies, as, in every case, much depends on the kind of hive employed and on various attending circumstances. "I have," said he, "several objections to the mode just recommended, by which the combs are transferred and the older bees return to their late home, uniting with the artificial colony there, which retains the queen. I have learned from experience that a queen so situated is apt to be killed by some of her own bees, returning from the new location on the second or third day. The most advantageous mode unquestionably is that which most closely resembles natural swarming; namely, driving or drumming out, when the driven swarm can be sent to a distant apiary. If this cannot be done, other modes must of course be resorted to, such as that proposed by the second speaker, as we then have the queen and bees together immediately, and need not wait for a gradual accession of numbers to constitute a colony."

Mr. Hempel remarked that, of course, he made his artificial colonies only on days when the bees were flying briskly, when assuredly very few old bees will remain with the transferred stock, because the absence of the queen causes alarm and excitement among them, inducing them to leave and return to their old stand on the same day. Long as he had practiced this method, he had never lost a queen thereby.

FORM AND SIZE OF HIVE.

Question 15. What is the preferable form and size of a hive—more especially of the brooding apartment? Mr. Klipstein, who had proposed this question, said that reasons deduced from physical laws had, on a former occasion, led to the conclusion that a globular form of hive, or some near approximation thereto, furnished the most suitable and best brooding apartment. To restate those laws and recapitu-

late the arguments then employed, would be out of place here. But there are certain propositions which, though quite correct in theory, must necessarily undergo various modifications in their practical application. "Though I have employed the term brooding apartment here," said he, "the gist of the question, from the very nature of the case, involves the whole wintering space required by a colony, for on the form and dimensions of that, in combination with the structure, internal and external, of the other portions of the hive, will the permanent prosperity of the colony ultimately depend. Hence the wintering space has an important bearing on the brooding space, because its size and adaptedness chiefly determine how early brooding will begin in the latter, and to what extent it will be carried, before the commencement of spring. This of course refers mainly to colder districts and the winter season. In milder districts and during the warmer seasons, the size and form of the brooding space is of much less importance." Mr. Klipstein then proceeded to discuss the subject of size and form of hive from this point of view, and with reference mainly to the assumed requisites, and concluded by stating as the result of his investigation, that for safe wintering, early and extensive brooding, ease of management, and suitable storage room, a hive should be ten inches square in the clear, or nearly so, and at most fourteen inches high. In all this, doubtless, Mr. K. had reference to the district of country in which he resides, intending that his figures should indicate the proportional dimensions of a hive presenting a square cross-section, and preserving the most attainable approximation to the globular form—his ideal of completeness.

Mr. Dathe stated that formerly, while residing in Saxony, in a district where fall pasturage is scarce, he used hives ten inches square and fifteen inches high. But when he removed to Hanover, he found that such hives were too large for profitable bee culture there, as the bees swarmed much later from them, and then more frequently than was desirable; and he came to the conclusion that a medium sized colony, as being less prone to swarm in summer, would be preferable. The result of experiments in this direction showed that smaller sized combs were more rapidly built and more speedily filled with brood, and that the bees swarmed earlier in the spring from such hives. He therefore adopted reduced dimensions, making his hives nine inches square and fourteen inches high, in the clear. Whether these dimensions were well suited for districts having more ample spring pasturage, he would not undertake to say, leaving that to be ascertained by beekeepers residing in such districts.

Dr. Poilman said that on the Lower Rhine, where he lived, frames nine inches broad had been commonly used heretofore; but that of late frames ten or eleven inches broad appeared to be preferred. Shallow frames, too, had been discarded, some practitioners now making them sixteen inches high—which he regarded as running to the other extreme.

Mr. Köhler remarked that Mr. Klipstein was

correct in regarding a body approximating a globular form as losing least heat by radiation. But that is not the sole requisite in a bee hive. Other considerations likewise demand attention. The material used in the construction of a hive is one of these. This may be of such a heat-retaining quality that an excellent domicile for bees may be made therefrom, though in form it be an ill-adapted structure. It should, furthermore, be borne in mind that the heat-retaining property of a hive depends not so much on the quadrangular form of its cross-section, as on the number and due length of the interspaces between the combs, in which the bees dispose themselves. The more we increase the breadth of a hive, the more, under like circumstances, will we decrease the number of interspaces and extend them in length—thereby making the hive really colder, so far as the bees are concerned, though in other respects it may seem to be rendered warmer. Again, a hive of bees is not merely a body which has absorbed a certain quantity of heat, and diffuses it again. It is likewise a continuously heat-generating body; and the heat thus generated flows mainly upward, in accordance with a simple natural law. Hence, if we would construct a hive on proper principles, we must introduce the greatest possible number of interspaces, and arrange that the bees in consuming their stores may move regularly upward, always finding a stratum of warm air overhead.

If I am now asked what the average dimensions of a hive should be, I can only reply that that depends much on the amount of bee pasturage commonly available, in the given districts where the hive is to be used. In one district, large and populous colonies must be provided for and maintained, if any surplus honey is to be secured. In another, such large colonies are objectionable, because there the pasturage usually available demands a different mode of management, and renders hives of a different construction indispensable. The point, therefore, on which the question hinges among established apiarists, seems to be this—are we to pass over from the use of apparently too small dimensions to larger ones? or, as the converse may be, from seemingly too large dimensions to smaller ones? I, however, regard it as of doubtful expediency in any case, for a beekeeper who has already in use a number of hives of uniform size, to make a change either way—thereby introducing hives of varying dimensions in his apiary. In large establishments this may not be so objectionable; but he who operates on a small scale only, will encounter so many difficulties and annoyances from such diversity of dimensions, as will more than neutralize any advantages derived or expected from the change. He, however, who is just starting an apiary, if residing in a district where bee pasturage is ordinarily abundant, though of brief duration, will do well to adopt hives with frames not more than eleven inches long; and if his district furnishes less abundant though more protracted pasturage, frames not more than nine inches long will be found preferable.

Mr. Hempel said he uses bars exclusively in-

stead of frames, and the experience of years had satisfied him that, for his purposes, hives ten inches wide and twelve inches high were the most suitable, in his district. He had formerly used hives only ten inches high, but his bees wintered badly in them, as they could not store sufficient honey overhead for winter consumption, and were consequently constrained to lodge and move along the sidewalls. Higher hives were therefore to be preferred; and last summer he could have wished that his own were somewhat higher than they are. The bees having stored up honey very abundantly, have so largely encroached thereby on their usual wintering space, as to reduce it to a minimum—a result which may prove injurious to them.

Mr. Deichert remarked that in assigning dimensions, Mr. Klipstein appeared to have reference exclusively to single hives. Where double hives and pavilions are used, some modification will be indispensable. In these the bees, during winter, lodge against the common partition, and great width of chamber would consequently be objectionable, especially if containing small colonies; because in winter much vapor would be condensed in the vacant spaces, and during a cold spell the bees could not reach the honey there stored. In pavilions, therefore, and in double or twin hives, a reduction of breadth and an increase of height will be advisable. When determining the dimensions of his own hives, he had been governed by the experience of Mr. Dzierzon, and adopted nine inches and a half for their breadth, and fourteen inches for their height. In such hives his bees had uniformly wintered well.

Question 19 referred to the expediency of holding a honey mart annually, in connection with the General Convention of Beekeepers; and inquired what arrangements would be needed for that purpose.

Mr. Hopf, who suggested the project, appeared to be its sole advocate. He conceived that the advance and the increasing importance of bee culture made it desirable that some increased facilities for the disposal of its products should be provided. Only one mart for honey existed in Germany now, and that was held annually on Maundy Thursday in the city of Breslau, at a time consequently which is inconvenient for those who use movable comb hives, as their honey is ready for market in July, August, and September. The annual meeting of the Beekeepers' Convention occurs at a more suitable period, and a mart conducted under its auspices would lead to extensive sales at fair prices, and thus create increased attention to this fascinating pursuit. The proposition however did not meet with encouragement, and the Convention proceeded to consider one of the deferred items:

Question 11, which was an inquiry whether the heath bee of Germany is a distinct race, or a mere casual variety of the honey bee. Prof. Leuckart contended that it was not in any respect essentially different from the common kind, and that its peculiar characteristics or apparently distinguishing qualities are due solely to local causes. His view was sustained by Mr.

Dathe and Dr. Pollman; but a communication from Mr. Gravenhorst (who was unable to be present) was read, in which the claims of this bee, to be regarded as a distinct race, were fully set forth and ably discussed. What primarily called his special attention to these bees, was the circumstance that when movable comb hives were first brought to his notice, and he attempted to use them, he failed of success. For this failure he could not account, inasmuch as he had followed the instructions of the ablest masters, and was fully convinced of the superiority of the hives and the system. But later, when he had opportunity to see and compare these bees with others brought from distant sections of the country, the conviction was forced on him that the heath bee was really a distinct race. He then stated his reasons for this belief, in an essay published in the *Hanover Centralblatt*, in the spring of 1868; and the Baron of Berlepsch subsequently expressed his concurrence in this belief, in a communication sent to the *Bienenzeitung*, saying *inter alia*, that "in form and coloring, that is, zoologically viewed, the heath bee is entirely identical with our common bees; but she possesses some such characteristic differences as entitle her to be regarded as a *distinct race*."

These special peculiarities of the heath bees, Mr. Gravenhorst finds solely and wholly in a more decidedly impressed disposition to swarm, and its correlative consequences. The chief points are—

1. Young queens will leave with and accompany a swarm, like old ones, even when the hive is not yet half filled with combs.
2. Young queens will swarm even in the same year in which they are reared.
3. If all the queen cells but one be destroyed on the ninth or tenth day, the young queen will, in ninety-nine cases out of a hundred, swarm out with a portion of the bees—leaving the parent stock queenless. This is an essential feature, according to Mr. G., to whom it was an interesting sight last summer—when all the native queen cells had been destroyed in a number of his colonies, and maturing Italians or common queen cells inserted—to find the bees swarm out in due time, but speedily return again, because the young queens of these two races refused to accompany the swarming multitudes. So certain was the result in every instance, that he finally ceased to pay any attention to these demonstrations, well knowing that the seceders would surely return home.
4. In strong colonies, heath bees are prone to build drone combs, even when they have young queens.
5. The heath bees prefer dwelling in small colonies.

These five points, especially the first four, Mr. Gravenhorst conceives may fairly be regarded as presenting peculiarities, justifying the conclusion that the heath bee is a distinct race.

Without expressing any opinion on this subject, the Convention took up the next regular question.

Question 17. Are railroads used by apiari-

ans in aid of their business? Might they not be more extensively used? And how?

Mr. Dzierzon remarked that this question had no direct reference to beekeeping as such; yet, if the business is not to be prosecuted for mere personal gratification, but become, through its products, an important branch of national economy, beekeepers must strive to make it yield the greatest possible profit. It must be made a mercantile business, the beekeeper seeking to make merchandise not only of his honey and wax, but of his bees and queens likewise. In this view, to aid in rendering beekeeping profitable, railroads might be used with advantage for the transportation of stocks from one district to another, from places where pasturage is exhausted to others where it is just beginning to abound. Colonies might also be sent from districts plentifully supplied, to others where they are still comparatively scarce; and a lucrative and mutually advantageous traffic be thus originated.

Mr. Dathe stated that, in Hanover, railroads were already much used for the transfer of colonies, in the spring from the yet unproductive heaths to the marshy districts where early flowers are in bloom. Again, in the fall, colonies are sent "by rail" to the heaths, from districts which have ceased to furnish supplies; and thus railroads facilitate communication, in this particular, between sections which previously had no intercourse. More still might be accomplished in this way, if the railroads passed through or led directly to honey producing districts. But such is not the case in every instance, and where wagon carriage must be resorted to, for the transfer of stocks from the line or the terminus of a railroad to the hill-sides or villages where the coveted pasturage is found, the expenses necessarily incurred leave a narrow margin of profit. Again, pasturage is not equally good every year, even in the same districts, and disappointment and loss sometimes await the "enterprising" bee-master, who has spent time and money in transporting his bees. Thus, though he had himself to transport his stocks only one mile, the cost incurred last season was not compensated by the returns.

Mr. Geilen said that he annually sent his bees twenty-five miles by rail, safely and cheaply. The agents do not hesitate to receive stocks as freight at moderate charges. The cost would be still less if a number of beekeepers were to unite and hire a car in common. Loading and unloading would then not have to be hurriedly done, while mutual assistance and supervision would prevent damage or loss. He had heard it stated that movable comb hives were not adapted for transportation; but his own experience satisfied him that this is not correct. If the surplus honey boxes are emptied, the entrances closed by perforated tin slides, and the hives properly placed and secured, no misgivings as to the result need be entertained.

The President now remarked that as the day was far spent, he would suggest that the consideration of the remaining questions be postponed. It had not been intended, when so

large a number was proposed, that all of them should be discussed at this time. Those not now disposed of, might be taken up by the Convention next year.

This Convention—the fifteenth—comprised three hundred and eighty-four members. Of these fifty-three were exhibitors; and twenty-four prizes, amounting to two hundred and fifty florins were awarded by the committee.

[From the Bienenzeitung.]

Pure Fertilization of Queen Bees.

The process for securing the pure fertilization of queen bees, recommended by Köhler and Dathe, which requires that the hives containing the queens and drones should be placed in a dark cellar several days, then replaced on their stands and opened in the evening, when common drones are no longer flying, is certainly an important advance in practical beekeeping. Nevertheless, it has some objectionable features. That it involves some trouble is undoubtedly true; but that is not properly a matter for complaint, because the bee-culturist must never be unwilling to incur any reasonable amount of trouble in the prosecution of his business. A more material objection is found in the fact that some beekeepers, though they have gardens, have no cellars suited for the purpose; and that where large bee pavilions and double or twin hives are used, the process is literally unavailable.

The method which I am about to communicate differs from the former in this, that it does not require the removal of the hives from their stands, is available with every description of movable comb hives, is convenient and easily practicable everywhere, and is altogether certain in its results.

It is presupposed that every beekeeper engaged in rearing Italian, Egyptian, or other queens, knows the day on which the young queens will leave their cells—a knowledge which is presupposed likewise when the Köhler or Dathe process is employed. By careful observations made by the Baron of Berlepsch, it has been ascertained that young queens do not leave their hives to meet the drones before the fifth day after emerging from the cell; and the eighth day may be assumed as the period of full maturity. On that day, if fair and mild, they will certainly leave the hive, if they have not previously done so. This fact, stated already by Dzierzon, I have found verified in numerous instances; bad weather alone causing a postponement of the excursion. Therefore, to guard against anticipation, on the fourth or fifth day open the hive containing the young queen, search for her, and confine her under an open-base wire gauze cage on the comb on which she is found, pressing the edges of the cage into the comb fully to the septum or middle partition. To confine her earlier might impede or prevent her perfect development. I prefer using the kind of cage mentioned, because the queen has then the comb for a foothold while she remains confined, feels more contented and at ease, and finds herself at

once among the workers when liberated by simply lifting the cage. But a still better mode of confining her is by means of a frame covered with wire gauze, and made to fit the hive closely both front and rear, and touching alike the honey-board and bottom. The comb on which the queen is found, with the bees thereon, is removed to a part of the hive having no communication with the entrance; another comb, with bees and honey, is set by its side, with the usual interspace; and the gauze-covered frame is then inserted between these and the rest of the combs. The queen is thus kept confined among workers, without restraining her personal liberty; and the bees in other portions of the hive, conscious of the presence of the queen, will remain content and prosecute their labors with customary assiduity, and usually without starting queen cells—as they would do if a close division board were inserted.

Three or four days thereafter, on the eighth day of the young queen's age, or, if the weather be unfavorable, on next fine day, in the evening after the common drones have ceased to fly, open a hive containing pure drones of the desired race, take out one or more combs on which drones are congregated, carry them to or near the hive in which the young queen is confined, and set them obliquely on a bench or stool. The drones will soon take wing, and hover about the place. Now open the queen's hive, take out the comb on which she is confined, liberate her and set the comb obliquely on the alighting board in front of her hive. In a few moments, the queen, attracted by the humming of the drones, will take wing and quickly disappear, but usually returns in about fifteen minutes, and enters the hive, to commence ovipositing three days later.

As soon as the queen leaves, the combs should be replaced in the hives from which they were respectively taken, and these properly closed.

By this process the pure fertilization of the queen bee is as completely under control, as that of any domestic animal whatever.

From the following occurrence, interesting in various other respects, it would seem not to be necessary even to set the comb on which the queen is, at the entrance of her hive before she takes flight. On the 10th of October, 1867, I received from Mr. Vogel a beautiful Egyptian queen, and introduced her in a populous colony. I may here state also, in passing, that I had confined the old queen of this colony, in a cage six inches long, on the 24th of August or forty-seven days previous. The bees nursed this queen carefully; built no queen cells (which they rarely do in the fall, if the queen is caged); the queen seemed quite healthy when I removed her; and the bees showed the usual evidence of uneasiness and concern, when she was taken away, and refusing for several days to accept the Egyptian queen introduced in her stead. The colony occupied one of the compartments of a six-chambered pavilion; passed the winter in good condition; and by the middle of May contained Egyptian bees exclusively, with very many beautifully marked Egyptian drones.

A comb with drone brood was taken from this colony on the 20th of June, 1868, and given to an after swarm of common bees from which the queen was removed shortly after. On the 6th of September, there were no longer any common drones in my apiary, nor in any other in my neighborhood. I had reared Egyptian queens in several nuclei, and deemed it needless to confine them at this late period, as pure fertilization would follow if they were left at liberty. In one of these nuclei the young queen was hatched on the 20th of August; but from the 27th of that month to the 5th of September inclusive, the weather was so rough that no drones were seen flying. The 6th was a splendid mild day, and I concluded to examine the nucleus to ascertain whether any eggs had been laid by the queen, now seventeen days old. The comb case in which I usually suspend combs on such occasions, was standing some eight paces distant from the nucleus, in the rear of a large bee pavilion from which bees were flying in great numbers; and as it was heavy and inconvenient to move, I preferred carrying the combs there after examination, where they could be covered to protect them from robbers. Finding no eggs in any of the cells, I was about to return the combs; but re-examining one of them while standing at the comb case, I saw the queen moving among the bees. But, apparently attracted by the humming of the drones which were then flying in multitudes, she took wing at that instant and flew away, unaccompanied by any of the bees. I immediately returned the combs to the nucleus, closed it, and placed a trusty assistant in front to watch the entrance, and note the return of the queen, if she came back. This was at three minutes past one o'clock. The assistant was instructed to close the entrance, whenever he had occasion to turn his eyes from it, so that the queen could not enter unobserved. In about fifteen minutes we saw a cluster of drones passing about twelve feet overhead, among which we supposed the queen to be. It passed rapidly, and disappeared. We continued to watch for three quarters of an hour, and as she did not return, we gave her up as lost, concluding that she had been unable to find her way back. I regretted the more to lose her as she was a beautiful bright yellow queen. We now engaged in other work about the apiary, till near two o'clock, when our attention was attracted by an unusual excitement among the bees in front of the nucleus. The bees were returning home in crowds, though the sky was entirely unclouded. Conjecturing that the missing queen was at hand, we resumed our watch, and soon after saw her hovering in the air in a few feet above the hive. In a moment she alighted at the entrance, attended by a crowd of bees, and promptly entered the nucleus. This was at five minutes past two, and she had therefore been absent one hour and two minutes. Twelve days later, on the 18th of September, I found large larvae in the cells, and capped brood on the 21st. The queen had evidently been fecundated on the 6th.

We were surprised to see so large a crowd of bees accompanying her on her return, as she

was not attended by any when she left. Did these bees find and gather around her while she was yet abroad at a distance? Or did they merely recognize her in front of the stand on her return, and join in welcoming her home? Though she was absent more than an hour, the latter conjecture seems to be the more probable one.

That the queen was able to return safely to her hive, though she had flown from a comb distant eight paces from it, may be accounted for by regarding the large retinue by which she was accompanied on her return, as formed by the bees which discovered and recognized her, for the purpose of conducting her to her native home.

DR. PREUSS.

DIRSCHAU, Oct. 18, 1868.

[For the American Bee Journal.]

Querist's Questions Answered.

[AMERICAN BEE JOURNAL, VOL. 4, PAGE 108.]

Querist desires to have some questions answered. I should like to try. It has long been my intention to write occasionally for the AMERICAN BEE JOURNAL, but my poor husband's illness prevented me hitherto. He is still lame, and requires great care.

QUESTION No. 1. Some beekeepers take the position that *natural swarms will gather more honey, build more comb, and have more brood* during the first week after they are hived, than artificial ones. Is this true? and if so, why?

ANSWER. Experience teaches us that natural swarms, as a rule, will gather more honey, build more comb, and have more brood during the first eight or ten days after they are hived than artificial ones. The reason is, that if the artificial swarm has not been made by a first-rate bee-master, accustomed to pay attention to everything, it will almost always get comparatively too many young bees—that is, bees which are not yet sixteen days old. Now, bees in the first sixteen days of their lives attend only to *in-door* work; and thus it is evident that, as there are not enough old bees to do *out-door* work, there is not as much honey gathered as by swarms which contain the just proportion of old and young bees, as natural swarms always do. With this the progress of comb-building stands in close connection. If there is but little honey gathered, but few combs will be built and very little brood raised, for brooding keeps pace with building. Another reason is that the artificial swarm is generally placed too near its old standing place, and consequently, during the first few days, many bees return to their old home. If you try to make an artificial swarm, by driving the queen and a number of bees out of a straw hive, add thereto outlying bees swept off from the front of other hives, and carry it about two miles from its old stand, *such artificial swarm will not be inferior to any natural swarm equally strong.*

QUESTION No. 2. Suppose we have, at the honey harvest, two colonies in the same apiary, each having 20,000 or 30,000 bees—the same number of old and young bees—the same

amount of worker and drone comb, a fertile queen equally prolific; the same quantity of honey and bee-bread, in the same style of hive, managed alike in every respect, and one gathers fifty pounds of honey and the other seventy-five pounds—what should cause the difference? We have cases on record very similar to the above, and who can give the solution?

ANSWER. If I really understand the question, I will give the solution. At the close of the season, you not unfrequently find hives, which seemingly have the same number of bees, the same amount of worker and drone comb, queens equally fertile, and nevertheless a difference in the weight of honey stored. There may be several reasons for this; but, as a rule the difference is caused by a *change of queen*. If one of the hives changes its queen, the honey harvest may be considerably increased or diminished by that occurrence. It is *increased* when the change takes place while nature is still rich in supplies of honey, for then the bees will have no brood to nurse eight days after the old queen is gone, and can devote all their time and energy to honey-gathering; and thus before the young queen is fertile and begins to lay eggs, the hive will be very rich in honey. It is *diminished*, if the rearing of the queen and her fecundation be too long delayed; for then the old bees are lost, from time to time, and before the young ones begin their out-door labors the honey season is over.

QUESTION No. 3. Novice says that he cannot doubt that it [meal feeding] saved them honey in some way or other. Now, is Novice sure of this. Please tell us what your bees used to make these little pellets of flour and meal to pack so nicely in their baskets? Do you think it was water? If it was not water, was it honey? If honey, whence did they get it, if not from their own hives? Are you sure they did not even go so far as to *unseal* their honey for the purpose named? If each hive used say five pounds of that rye and oat meal, how much honey think you does it take to pack it into bee-dough? Did you not also observe that your bees began to breed quite rapidly, as soon as they began to work on your out-door food? When they are raising young bees, do they not use up the honey just in proportion to the rapidity of breeding?

ANSWER. 1. Bees do not *save*, like a good housekeeper. They require each day a certain quantity of honey to nourish themselves and their brood, and that quantity they use, whether they have much or little to live upon. If that quantity is wanting, they do not content themselves with half rations, but decamp, or starve. 2. *Water* will not answer for making those little pellets, because it is not glutinous. In order to pack their pellets so nicely in their baskets, bees use *honey*, which they take along with them out of their hives. You can prove this by tasting such little pellets, when you will surely detect the honey. 3. If they are obliged to carry in meal or bee-bread, and have not enough *unsealed* honey they certainly will *unseal* it. 4. It would be difficult, if not impossible, to state precisely in figures the weight of honey which bees will want in carrying five

pounds of flour; but I believe that *one* pound would be more than sufficient. 5. Yes, for then they find bee-bread in nature, and then, and then alone, do they breed rapidly. This is an indisputable fact. 6. The more brood they have, the more honey they use.

QUESTION No. 4. Novice says that his *low, broad, flat* hives have given him, the past two years, more honey and have been stronger in winter stores, than the *tall, narrow* hives. Why this is so, he cannot explain.

ANSWER. *Low, broad* hives give generally more honey, than *tall, narrow* ones. In *low, broad* hives breeding never gets to such an extent as in *high, narrow* ones; consequently, the one kind have more honey, and the other more bees. For *breeding*, broad, low hives are not to be recommended. The rational beekeeper will always use hives from nine to ten inches broad, and from sixteen to eighteen inches high. A little more or less is of small consequence.

QUESTION No. 5. Mr. Bingham writes about preparing hives for winter, and comments on Langstroth's statement that he found *frost* on the top of a board placed above six thicknesses of carpet, and then assumes that no *moisture* can pass through a tight board placed over a colony of bees. Is that sound philosophy? Is not lumber so *porous* that heat can drive *moisture* through it?

ANSWER. If the board is but half an inch thick, no *moisture* will pass through it. But it must lie tightly, and be well cemented on *all sides*, or the warm air charged with vapor will pass through the crevices, and then the bees will suffer for want of water, and perish.

QUESTION No. 6. On page 110, I find that the darker the hive, the more contented are the bees. Now, would you advise me to paint my hive *black*?

ANSWER. Bees only like darkness *within* the hive; whereas they dislike the dark color *out of it*. If you would paint your hive *black*, bees would hesitate long before entering it. To paint it *black inside* would be useless, as every hive should be so constructed that light is only admissible through the entrance. If bees are generally treated by a person wearing light-colored clothes, they will readily attack and sting a person dressed in black who presents himself before their hive.

QUESTION No. 7. On page 114, I observe that young swarms build worker combs *exclusively* at first. No exception to this rule, I suppose. Now, if a young swarm has a fertile queen, and she fills a small comb with eggs during the first forty-eight hours after being hived, and then dies from disease or accident, would the bees make *much* worker comb while they are rearing a new queen? Or would the bees decamp?

ANSWER. At first, that is about the first eight or ten days after being hived, every swarm builds worker comb *exclusively*. If the fertile queen is lost or killed by some accident during the first forty-eight hours after being hived and having begun to fill a comb with eggs, the bees will not decamp, but will rear a new queen. And until this new queen is fertile, they continue to build in some measure; but with very rare exceptions, they build *drone* comb only.

Having thus answered Querist's questions, I beg leave to add that, if he is able to read German, it would be well for him to order, through the importers, my husband's great work—*"Die Biene und ihre Zucht mit beweglichen Waben, in Gegenden ohne Spätsommertracht, von August Baron von Berlepsch, 1ste Auflage, Mannheim 1869, I Schneider, Preis 4 Thaler."* It would be exceedingly useful to him, and not only answer all his queries, but teach him many valuable things besides. I do not say this because the book was written by my husband, but because it is really acknowledged to be the best bee-book in Germany; and that the Germans do know something about bee-culture, and are *thorough* in everything they cling to is known as well, and conceded. If you devote a lifetime to some branch of knowledge, you are pretty sure to understand it.

When my husband was yet quite a young child, he used to tease his nurse by running to a neighboring apiary and asking her to get some honey. On his seventh birthday, his father took the boy's hand and conducted him to the garden, where was placed a little beehive and a hive, which his father had bought for him, and said to him—"That's your birthday present!" Near the hive stood, hat in hand, *Jacob Schulze*, a simple peasant, but a clever beekeeper. Thenceforward he was my husband's teacher and bee-friend. From the 28th of June, 1822, to the 12th of December, 1854, when he died, that man was always honored and befriended by my husband; for though a peasant by birth, he was truly a gentleman in heart and character.

From 1822 to 1869, my husband loved and tended his little winged favorites, and the experience of forty-seven years is treasured up in the book above-named. It contains not only his own rich knowledge of bee-life and bee-keeping, but also that of other celebrated bee cultivators; and is a perfect treasure for every bee-friend. I wish it were translated into English, for it would be the very thing for the good practical sense of the Americans.

I do love America:

"Long may her Eagle soar
Proudly from shore to shore,
From sea to sea!"

LINA, BARONESS OF BERLEPSCH.
COBURG, SAXONY, March 3, 1869.

[For the American Bee Journal.]

The Last Season not all a Failure.

The past season has been a very poor one for bees, in this section; yet I know of one man who has had good success. He lives about sixteen miles from me. He started with twenty-nine swarms, and increased them to sixty-four, mostly by artificial swarming. He got about two thousand pounds of surplus honey, and raised fifteen Italian queens to sell; besides Italianizing some of his old stock.

WM. J. MERRILL.
PLEASANT BROOK, N. Y., April 2, 1869.

[For the American Bee Journal.]

A few Questions from England.

MR. EDITOR:—Accept my thanks for your invaluable JOURNAL. Although three thousand miles of watery waste roll between us, we Britishers, (that is, the fortunate few that take the JOURNAL), are regularly made acquainted with the ups and downs of our little friends in Yankeeedom.

Now, Mr. Editor, I have one or two questions to put before the beekeeping brotherhood. It would give me great satisfaction if Gallup would "try his hand."

The real superiority of the Italians, in what does it consist?

Are Italians more difficult to handle than black bees? I have only one stock of the former, and they sting furiously.

The popular way to handle bees; whether by smoking, or liquid sweet, or neither?

Is there any way to prevent the accumulation of propolis—sealing the honey-board and frames so tightly as that they almost become fixtures?

What decision have the bee-keepers arrived at concerning red clover? My stock of Italians was separated from twenty-five acres of red clover merely by a turnpike road and a high hedge; and yet on neither crop could I see any of the family of *Apis*, excepting a few humblers. If Italians really do work on red clover, almost any part of Kent is good for apiculture. But I fear that is too good to be true.

Another question is, whether, by doubling correspondence and *cash*, we can get the BEE JOURNAL fortnightly?

The last question, though last is not least, do we not all hold ourselves indebted to Mr. Langstroth? Is he not the Father of modern hives, and the Prince of modern apiarians? A correspondent wrote some time back that we owe him a debt not only of gratitude, but of *cash*!

Brother Bee-keepers, if this is so (and it really is), should we not find a pleasure in attempting to liquidate that debt? Surely it will not be so difficult a question as the present standing Alabama Claims! Any plan American bee-keepers may devise, (providing it does Mr. Langstroth justice), I will cheerfully subscribe to.

Mr. Editor, I do not wish to intrude on your space, but allow me to thank Mr. Gallup and all other correspondents, who so unreservedly give us their experience.

WALTER HEWSON.

WICKHAM-BREAUX, KENT, ENGLAND.

In their modes of flight the several species of bees vary considerably. Some, like the *Sarapoda* and *Anthophora* dart along in a direct line, with almost the velocity of lightning, visit a flower for an instant, and dart off again with the same fleetness and vivacity. Others, like the humble bees and the hive bees, leisurely visit every blossom, even upon a crowded plant, with patient assiduity, sedulously extracting and appropriating the secreted nectar.

[For the American Bee Journal.]

Remarks on the Bee Disease.

In the March number of the BEE JOURNAL, Mr. J. Davis, on page 172, states "facts" and asks "questions" about the late prevalent bee disease. Now, I think the problem is not a very difficult one to solve. I have had a perfect shower of letters from Kentucky, Indiana, Illinois, and portions of this State, with reference to the disease; and the statements appear to be very contradictory. From these letters and from what I have learned from the BEE JOURNAL, it is hard to give a positive answer as to the cause of the disease, if all the statements are true. I do not wish to be understood as accusing any one of falsehood. It may, in part, be owing to the fact that all the correspondents are not practical or experienced bee-keepers, that the statements are so contradictory, even from the same neighborhoods. But, with my friend Davis, I can be positive, from personal observation of cases of a similar kind. The reader will notice particularly that Mr. Burbank, of Lexington, Kentucky, fed his bees, and on the 14th of January they were all right. (See March number, page 164). Now, let us look at the facts. In this section the season was good up to the 25th of July, and then the extreme heat cut off the honey crop at once. Still, the Italian bees kept on raising brood until the last of August. Young swarms, that had been building comb, stopped breeding from two to three weeks earlier than swarms that had their combs all built. Mr. Davis asks, will the queen cease to lay eggs if the bee pasturage fails? She certainly will, and last season demonstrated that fact conclusively. Understand that if the failure is only of short duration, the cessation of brooding will be only partial; but when long continued, as it was last season, the cessation is complete. He also asks why it should be so extensive and general? Answer, because the drouth and extreme heat were extensive. He further enquires, if it was a general thing everywhere that bees were dying, or was it local? Answer, it was general, so far as the drouth or extreme heat extended, except where bees had access to buckwheat pasturage. In neighborhoods where they had not access to buckwheat fields, they died; and three miles off, where they had access to buckwheat, they are in excellent condition. The buckwheat came in, here, just at the right time, before the queens had entirely ceased breeding, and hence the usual fall brood was matured. Where the bees could not resort to buckwheat blossoms, there was literally nothing for them to gather until September; and the bees having been so long a time, at that season of the year, without pasturage, when they re-commenced gathering, gathered very rapidly, paying no attention whatever to their queen, and she consequently laid no eggs. Here, there were only six days in September that they gathered honey. They commenced on the 8th, and continued three days; then, after a cessation of five days, followed three more gathering days. When bees

work rapidly, they wear out rapidly; and in this case there were no recruits to make up losses. But the great diminishing of numbers did not take place until the latter part of October and in November; and swarms that stopped breeding first, diminished first. They did not die with poison, but with old age, in every case that came under my observation. When bees die with old age, and the weather will permit, they always leave the hive before they perish. Late swarms, which were examined about the first of October, were strong in numbers; but by the last of October they had dwindled down to a quart in bulk, and in some cases to a mere handful; but the queen was there. The Italians being longer lived, the diminishing in numbers did not commence so early in the season, as with the black bees. Mr. H. C. Bernard, in the March number of the JOURNAL, says—"Those hives that contain large quantities of honey, and no bees, must certainly have gathered it." This we are not going to dispute. But he adds—"Experience teaches me that bees breed freely when storing honey." Now, friend Bernard, this shows that you are not a close observer, for if you had examined those stocks, you would have found that they actually did not breed while storing said honey. When the queen has entirely ceased breeding, by the middle or last of August, in consequence of the scarcity of forage, it is almost invariably the rule that if forage be gathered again abundantly in the fall, the queen does not recommence breeding, unless the gathering be of long continuance. There are exceptions to this rule, but I have found them rare, indeed.

I can assure the reader that there is no poisonous honey gathered in this section of the country; yet the result was just the same as in other sections. I account for the discrepancies in the various communications in this way. That the bees are dead, is a fact which all have discovered, and each indulges his own fancy or imagination in seeking for a cause, and imagination seems very wild with some. Allow a swarm of bees to become queenless about the first of August, and in November the bees are all gone up, in the same manner and with this same bee disease; and this does not prevent their hive from being full of honey. In every case where bees were fed, either artificially or from natural sources to keep up the breeding of the queen, I hear that the bees are all right. Yet in those cases, in all probability, as many bees died as in the other, but the increase from brood kept up the population and the loss from natural mortality was never noticed, though it was nevertheless a fact. There has been and there still will be a great loss of stocks in this section of country. I did not feed my bees, and there is where I made a blunder as it turned out; but if we had not had those six days of honey-gathering in September, I had done right. On the first of October I saw that some of my stocks that had stopped breeding earliest were decreasing too rapidly, and I immediately set them in the cellar to stop the decrease. The result is, that, out of thirty-four stocks, I have six that occupy with bees only from four to six

frames in each hive. On the last of February I was very sick, and for two weeks did not go into the cellar. The weather being very warm, and the ventilation to the cellar not being open, all my strong stocks commenced brooding rapidly. I am now (March 20th) equalizing my stocks in the cellar, by taking a few bees at a time, every evening, from the strong and giving them to the weak stocks. This sets the queen to breeding, and in spring, when they are first set out, all those old bees are going to die off with old age; and if we do not then have young bees to take their places, the stock is gone up with *that bee disease*. But, by setting them to breeding rapidly, before they are set up, they will come out all right.

The want of pollen has nothing to do with bees dying, for the fact is that bees will winter on good honey, without a particle of pollen. The bees, last season, not raising their fall brood as usual, did not store the quantity of pollen they generally do.

I never tried the plan of setting bees in the cellar as soon as they cease breeding or gathering forage, or of burying them, which, if I understand rightly, is Bidwell Brothers' plan; but I am inclined to think it is a good plan, as it will keep up the strength of the stocks, instead of allowing them to dwindle away to nothing. Thank you, Mr. Davis, for stating facts and not fancy.

ELISHA GALLUP.

OSAGE, IOWA.

[For the American Bee Journal.]

The Economic Hive.

MR. EDITOR:—Being your most northern Canadian correspondent, and a constant reader of our valued BEE JOURNAL, while the bee hive question is being so earnestly discussed, I may be allowed an article on that subject, which—though it may not instruct that well-rooted novice of yours—may yet be of use to some younger plants, both north and south, who are commencing to read the JOURNAL.

All will admit that uniformity in the size and shape of hives, throughout an apiary, is a matter of great practical convenience, especially where honey boxes and movable frames are used. Where extra queens are reared and kept on hand, as should be the case in every well conducted apiary, facilities thereto, should likewise be considered. Size and form of hive, also have much to do with success in building up stocks from small nuclei. Moreover, where a large amount of extra honey is desired (and where is it not?) arrangements should be made to facilitate its storage, suited to the designed method of removal, whether by the centrifugal mel extractor or surplus boxes. Due regard should also be had to simplicity of construction and small cost.

I have carefully studied the instincts of the honey bee, together with skill in controlling those instincts, and *economy in handling*, and and increasing, and preserving; and, with

reference thereto, have sought for that one form and size of hive, which, without essential change, best answers the greatest number of practical ends. As the result of my study and practice thus far, I present what I shall call the **Economic Hive**, because it can be so cheaply and conveniently adapted to so many uses. It is made of sound inch boards, and, when complete, is three stories high, and covered by a temporary roof for shade and shelter. Two stories are designed for frames, and the third for surplus honey boxes. The several stories are made separately, so that the first story may be used by itself, or in conjunction with the second or third stories, one or both, or all together, as circumstances or design may require.

The first story is made 12 x 20 x 12 inches, inside measure, or twelve inches wide, twenty inches long, twelve inches deep; and is set upon a low foundation, eighteen by twenty-six inches.

The second story is made 12 x 20 x 11 inches, inside measure, to set directly upon the first story and kept in place by thin base boards nailed all around and shooting a little over the first story.

The third, or half story, as it might be called, is made in the form of a cap, fourteen inches wide and twenty-two inches long, inside measure, and any height desired, to accommodate one or two tiers of boxes, which I make after Quinby's pattern, of glass set in posts, 7 x 13 x 6 inches, outside measure.

The frames I make ten by eleven inches clear, inside measure, and set them in the hive so as to leave one-fourth of an inch space around and over them, and one inch beneath, in the first story. In the second story (made shallower by one inch) the bottom of the frames comes down to within one-fourth of an inch of the top of the lower tier of frames. No honey-board between. I use thirteen frames, running crosswise, in each story, save in the breeding season, it will do to use fourteen, all filled with worker comb, in the lower story. The frames in the second story, to be emptied as occasion permits, by the aid of the mel-extractor, may consist in part or altogether of drone comb; so that by the use of the two tiers of frames in the two stories, all worker comb can be selected for the first or breeding apartment.

As all understand the use of surplus boxes, it only remains to show how usefully the first story may, in a variety of ways be used alone.

First. As, a stock hive, two entrances are necessarily made through the sun side, about four to six inches from either end, and closed or regulated by ventilating buttons, metallic slides, movable blocks, or channels in the bottom board, and these also answer for most other uses. Now, if extra warmth is desired, this first story covered with a loose board 14 x 22 inches, may be surrounded by a cheap rough case 16 x 24 x 18 inches, inside measure, and the vacant space filled with buckwheat hulls or some light material—thus making the hive, when rightly ventilated secure for fall keeping or even wintering out, and warm for early spring breeding. Later in the season, it may be desir-

able to remove this case, when, by the use of nicely fitting division boards, some very important purposes can be very conveniently accomplished, for which it seems to me this size and form is best adapted.

First. If it is wished to use a choice queen for providing a stated supply of perfect queen cells, as is my custom, two frames should be removed from her hive and a division board inserted across the middle, and if a board half an inch thick be inserted at either end, it will of course aid the warmth, and when lifted out leave more room to work the remaining frames—six in number—in each apartment, which will be just 9 x 12 x 12 inches, leaving each frame at the right distance from the others. Now, in the apartment without a queen, cells will be started, and with due care in alternating the queen from end to end, every nine or ten days, a stated supply of cells may be safely kept up, which will be far better than those forced in the little nucleus boxes.

Second. To prepare one of these Economic hives for rearing queens, it is only necessary to make an entrance in the middle of the back side and insert two (2) well fitting division boards, and you have three apartments each 6 x 12 x 12 inches, just large enough to receive four frames, and right to be covered by a honey box. Now insert your comb with brood and bees, and you have three nice little stocks, each aiding to keep the other warm, and ready to take charge of your extra queen cells; and (providing each queen, on becoming fertile, is left long enough to fill the combs with eggs), as good in proportion to their numbers, for box honey, as larger stocks. These little stocks, left in this way with their queens, and an extra box of honey over them, will winter in a warm cellar just as well as large stocks. And, what a treat, three queens to a hive! for emergencies in the spring, or with which to start early artificial swarms.

Third. To rear stocks from a nucleus, two division boards may be used, and a few combs with brood, bees, and a queen cell inserted in either end, and built up Gallup fashion. Then one division board may be left, and both queens wintered; or one queen and both boards removed, and the stock treated as desired.

Now, Mr. Editor, I doubt whether any other hive, so simple in construction, can combine so many valuable advantages. Mr. Hazen's and Mr. Quinby's new hives are no doubt excellent of their kind. But at this stage, when the mel-extractor seems to promise such a saving of comb-building, an arrangement for the accommodation of extra frames seems desirable, rather than one for surplus boxes. In my opinion, Mr. Gallup, in the crosswise frame, has hit upon the best general form, of which my preference is just a modification.

I must say that I have received from Langstroth, Quinby, Gallup, and others (as anyone may) many useful hints; and to me the impression made is unpleasant, when any of these experienced and useful men, in the art—or their work—is spoken of lightly or slightly. If, after much effort, they have not reached the maximum, neither doubtless have others; and

if any of us should attain to brighter ideas, we may after all be indebted to them for many of the seed thoughts which, under joint culture, have only grown a little.

As regards patents, I could wish, with Quinby and Gallup, that a matter so simple as bee hive improvements were left untrammelled by conflicting claims. It may be justice to give leaders in the exposition of an important principle some such advantage; but for myself I can say I am amply repaid in honey and pleasure for any improvement which I can make, and am quite willing to reciprocate with the public for advantages which I may in like manner receive in return.

As a minister of the gospel, I magnify my office, but am quite an enthusiast in bee-culture. And with good reason. For I know nothing beside so well calculated innocently and profitably to rest a weary mind, as this. After long and intense application to necessary study, an hour's airing and excitement in the beeyard completely rejuvenates the jaded powers. So my bee-yard serves me for more than cash and pleasure; and, like Novice, I am longing with all bright anticipation for the summer of 1869—while two to four feet of solid snow upon the ground, makes it necessary to keep bees housed as yet. But brighter skies announce the spring at hand.

"Come gentle spring, ethereal mildness, come!"

J. W. TRUESDELL.

WARWICK, P. Q., CANADA, April 6, 1869.

[For the American Bee Journal.]

Novice's Reverses.

Now, please, Mr. Editor, do not let the "knowing ones" say, after reading the above heading, "it's just what we expected!" We are going to confess the whole, and then all can judge if it was altogether our own fault.

When we last wrote you, we were going to winter our thirty-five stocks so "scientifically" that we couldn't lose any. But, oh—well!—the truth is that

"Man proposes, and God disposes,"

in regard to bees as well as other events. Owing to a rush of business about the holidays, we really could not get our bees into that cellar (which we were going to keep so carefully at an even temperature of forty degrees), until just before New Year; so that they had been out during a severe cold spell. After getting them in, in a satisfactory shape, we arranged the ventilation and temperature so, that they were as quiet and orderly as we could wish, for a few days. Then the weather kept getting so much warmer, that we were obliged to raise the caps from the hives, and give all possible ventilation, as we mentioned in a former article. In this way we managed until along in February, when the weather became so decidedly "summery" that we thought we should really be obliged to put them out, and were only deterred from doing so by thinking that it must certainly "come cold" soon, according to the prophecies of all the old farmers, that our

winter had not come yet. So we waited for even a cold night, to open the doors and windows of the cellar; but even *that* would not come.

About the last of February, one noon, we made an examination and found the floor thickly strewn with dead bees, and many of the hives covered with a tarry excrement and emitting a most unpleasant smell. This decided us to set them out the next day, at all events, and we started away to business. But, while walking up street, we fell to musing how we had many times put off until to-morrow some disagreeable piece of work and had afterwards repented, until we ended by wheeling about towards home, and immediately put every stock on its summer stand. We determined to make a thorough examination of every stock, regardless of clothing; which we should have done, had not the weather turned so freezing cold before we had finished, that we were obliged to stop. We found many of the bees occupying the centre of a filthy mass of dead bees and the substance before mentioned, which covered the combs and everything else—many of the bees crawling out of their hives and dropping on the ground.

Mr. Editor, what could we do? We thought of the bee disease, cleaned out the hives as well as we could, and tried to feed honey that had been gathered in June; but it did no good. All we could do, was to wait for a return of that unseasonable warm weather, which we have not seen yet, (and it is now the fifth of April), unless we except a few days in March, when we induced what were left to work on rye and oat meal. Since that time they appear all right.

We have only thirteen stocks left out of thirty-five; and the dead include nearly all our heaviest stocks. The one that produced the two hundred and three pounds of honey last year was most lamented of all.

Nearly all left plenty of honey, although some of them had consumed an immense amount by the first of March.

A neighbor near by lost his only Italian swarm, with the same symptoms, which remained out all the winter. The hive contained very few bees, (as in fact was the case with most of ours), but was nearly half full of scaled honey.

We dislike to think all this the result of our ignorance; but cannot see the difficulty, unless it was bad honey, or because there was so little brood raised in the fall that nearly all our bees were old.

Now, Mr. Editor, instead of those jars of honey which we talked about, we are going to see how soon we can build up our number again, with the aid of plenty of combs, honey, and the knowledge gained by three years' experience, if we are only a

NOVICE.

The first fifteen days of the new establishment of a swarm in a hive are employed in the most active labor. There is sometimes as much work dispatched in that little time, as in all the rest of the season that is proper for working.—WILDMAN.

[For the American Bee Journal.]

Some Questions in Back Numbers Answered.

While reviewing some back numbers of the BEE JOURNAL, I see on page 58, vol. 3, Mr. J. L. McCune asks two questions. *First*—Will there generally be a noticeable difference in the markings of workers from mothers, one of which is a pure Italian queen but mated with a common drone; the other a common queen mated with an Italian drone?

I kept about half common bees and half Italians in my apiary for three years, to test the superiority of the two kinds; and had many queens impregnated by drones of their opposite color. The workers from black queens that mated with Italian drones seldom showed more than *two* bands; while the Italian queens that mated with black drones, always produced some bees that showed *three* yellow rings. Judging from observations made in my own apiary, my opinion is that the black queens, impregnated by Italian drones, showed the *fewest* yellow rings.

Second query:—Has any one, not raising queens for sale, ever had bees to work freely on red clover?

I intend to raise Italian queens this coming season, for sale; yet I will answer his question *candidly*, and Mr. McCune can take it for truth or not. I have had Italian bees for six years, and live in a section of country that has hundreds of acres of red clover every year; and yet I have never seen bees gathering honey from it except in two years, 1862 and 1864. In 1862, I had no Italian bees, but had one hundred and thirty colonies of black bees, and saw them gathering honey from red clover for about three weeks. That was the best honey season we have had here for twenty years or more. The red clover blossoms were filled almost to overflowing with honey, and I often saw two bees filling their sacs from one blossom, and then leave honey in the little tubes that they could not reach. In 1864, I saw both Italian and black bees work on red clover for a few days, in the forenoon, but *never* since.

I have bought queens from Mr. Langstroth, but cannot get their progeny to gather honey from red clover. It may be that his soil is so poor that the blossoms are short, or produce more honey than mine.

In the same volume, some beekeeper whose name I have forgotten, inquires if paint will prevent bees from sticking the honey-board fast to the upper bars of the frames? No! I have tried it with both the black and the Italian bees. They stick it just as fast, with the paint, as without it.

Some tell us that *fresh paint* is so offensive to bees, that they will leave the hive if a swarm is put in one freshly painted. I have, on some half dozen occasions, put bees in hives just painted, and they all went to work the same as in other hives. I have often had bees come where I was painting, and stick the paint on

their legs just like pollen and carry it off, I presume to daub up the crevices, or to use it in some way as propolis.

H. NESBIT.

CYNTHIANA, Ky., April 2, 1869.

[For the American Bee Journal.]

That Reply (P)

MR. EDITOR:—In the April number of the JOURNAL, I find an article headed "MR. KIDDER'S REPLY," and containing over his signature some references to statements made by Mr. Gallup, and an article headed "FACTS," which appeared in the January number of the JOURNAL over my signature. I presume Mr. Gallup is abundantly able to attend to his share of this "reply."

As regards the case in hand between Mr. Kidder and myself, I have but a word to say. He begins his reply to my "Facts" by stating that I have asserted certain things. This, to put it mildly, is not a "Fact," as your readers will see for themselves by turning to page 135. Mr. Kidder's controversy should not be with me, but with the Judge and Clerk of the United States Circuit Court—they being the parties who make the assertion that the suit in question "was brought to a final hearing upon pleadings and proof!" With all due deference to Mr. K., I would submit that officials are in a position to know what were the facts, quite as well as Mr. Kidder; and the public will be apt to accept their *official* verdict in preference to any mere assertions of one who, after boastfully advertising that he was defending the suit and prepared to show various things, "if Mr. Otis would let the suit come to trial," now faces about and states that the suit went by default, Mr. "Austin deeming it advisable to pay no more regard to it."

I will not occupy more of your valuable space, it being very plain that Mr. Kidder must join issue with Judge and Clerk, in place of with me. They are the parties who state officially the "facts" which Mr. K. will find need a better reply than bare assertions which are directly contrary to "facts." They are of the impression that the defendant was adjudged to pay damages and costs; and they are in a *position to know*. I take their word for it, not having been present at the trial, and Mr. Otis being no "agent" of Mr. Langstroth, but the owner of the patent for the territory in which Mr. Austin lived.

JAMES T. LANGSTROTH.

OXFORD, BUTLER CO, OHIO, April 6, 1869.

When straggling bees come into a room, if the upper sash of the window be pulled down, they will presently go out again. But where windows are not so constructed, the bees should be gently brushed down to that part which does open, or otherwise they will beat themselves to death against the glass, as they always ascend to the upper part, where the most light is.—KEYS.

[For the American Bee Journal.]

Gallup on the Kidder Case.

MR. EDITOR:—It appears that our friend K. P. Kidder is still alive. In the April number of the BEE JOURNAL, page 195, he says: "I have no recollection of supplying Mr. Gallup with queens," &c. In the spring of 1864, Mr. Joseph Bates, of Fond-du-lac, (Wis.) sent five dollars to Mr. Kidder for an Italian queen, and when said queen arrived, I took her out of the shipping box and introduced her to a black colony for Mr. Bates. Now for a description of said queen. She had one very narrow stripe around her abdomen, and the next ring was tinged a trifle about half around the abdomen; the rest of the abdomen was as black as any tar I ever saw. At the time of introducing her, I unhesitatingly pronounced her to be not over one-fifth blood Italian; but we concluded to wait for her progeny. In about four weeks we examined the brood, and on about one out of every dozen we thought we could see a small stripe, but we were not sure. We both examined to see that the queen we introduced was there; and there she proved to be, just as black as ever. In the December number, I did not think that anything less than half a stripe was worth mentioning.

Mr. Kidder further says that he gives his customers a warranty that the majority of workers from his queens shall have three distinct bands or stripes. Now I have seen queens that all of their workers show the three distinct bands or stripes, and all those that produce any workers with less than three stripes, I pronounced impure every time. Those stripes, too, can be seen without multiplying glasses.

You may ask why did not Mr. Bates send for another queen? Answer, because I considered a warranty from a man that would send out such a queen as pure, good for nothing; and I am still of that opinion. I can see no possibility of any chance for mistake in such a case. There is a possibility for an honest person to send out an impure queen, impure from being impurely impregnated; but to send out such a queen as I have described, needs no comment.

Mr. Kidder has been very unfortunate in another particular. He has advertised small packages of pure Alsike clover seed, at twenty-five cents per package; and in every case that has come under my observation, or that I have been informed of, it has persisted in growing common white clover, instead of Alsike.

I will further state that I have seen several stocks of Italians, where the queens were obtained from Mr. Kidder, owned by different individuals, and have never seen any that I considered pure. But I am not going to assert that he never sent out any pure ones.

About that suit. I received, from a friend, what I understand to be a copy of a judgment; and I mentioned it as I did, for the purpose of drawing out Mr. Kidder. I wished to see what he had to say on the question. Mr. Langstroth has had published on page 135, a true copy of said judgment, and that does not correspond

with Mr. Kidder's statement at all. In fact it is just the reverse. If this Wm. D. Shipman is a myth, and said decision also, it would be very easy for Mr. Kidder to prove it so. Utica, N. Y., is certainly not a myth, for I have been there. I do not understand as Mr. Kidder does, about the "proofs and pleadings." That is, I do not accept the copy of the judgment as Mr. Langstroth's assertion, but as a matter of Court record, which Mr. Kidder's mere assertion cannot overthrow or disprove. Furthermore, if said judgment was taken by default, it will be found so recorded, or else they do business differently at Utica from any Court of record that I ever knew anything about. The records are kept expressly for the purpose of showing the facts.

If the plaintiff in the above mentioned suit paid the costs, he was more liberal than the generality of plaintiffs would be in such cases. But perhaps the defendant was like the Dutchman's dog, *not worth one cent*. The Dutchman sued a man for killing his dog, and swore in Court that the dog was not worth one cent., but since the man was so mean as to kill the dog, he wanted every cent the dog was worth.

The reader will see also that Mr. Kidder tacitly admits that his hive, at the time of said suit, was an infringement on Mr. Langstroth's rights; as he has seen fit to make an alteration in his hive or frames, so as to avoid an infringement. I was informed, about two years ago, that Mr. Kidder was obliged or saw fit to make said alteration, since Mr. Langstroth obtained his re-issue.

By the way, why does not Mr. Quinby or Mr. Langstroth procure some of Mr. Kidder's superior stock of Italians—say the light colored ones for which he got up the patent cuts, and then accused Professor Flanders of stealing his thunder or his patent cut?

If any farmer wishes to know what Mr. Kidder's patent bee preserver is, he can take his fanning mill screen, remove the honey-board and place the screen over the hive, fasten up the entrance, and he will have it. But let him look out, or Kidder will prosecute him for making use of his patent. Oh, humbug, what a jewel thou art!

ELISHA GALLUP.

OSAGE, OHIO.

[For the American Bee Journal.]

MR. EDITOR:—In perusing the BEE JOURNAL, I notice many plans suggested to prevent the production of drones in hives. Perhaps it may be interesting to some of your readers to know the process I pursue to that end.

In the spring, before the bees begin to gather stores, I take out the frames, and cut out all the pieces of drone comb, supplying their places with worker comb. Thereby the object is attained at very small cost; and stocks so treated ever after produce very few drones.

J. C. WEDGE.

FOND-DU-LAC, WIS.

Among the ancients, Aristomachus contemplated bees for the space of fifty-eight years.

[For the American Bee Journal.]

Cost of Brood.

MR. EDITOR:—I would like to get the opinion of some who have experience with frame hives, about the amount of honey it takes to raise a thousand young bees from the egg till they are capped over.

My bees lost in weight, from August 4th to 24th, or in sixteen days, eleven pounds each, or eleven ounces per day, viz:

No. 1, with about 7,000 drones, 11½ lbs.

No. 2, with a young queen and 1,000 drones, 9 lbs.

Nos. 3 and 4, with 5,000 drones, each, 11 lbs.

They had gained, from July 2 to August 1, over thirty pounds each, and probably had a large amount of brood to feed. The number of drones was estimated from the brood previously in the combs. From appearances outside the hive, I should not have judged there were over four or five hundred drones in each. From the difference of two pounds, in sixteen days, in favor of the hives with few drones, it would appear that the usual number cost the apiarian two ounces per day, or twelve pounds of honey for three months to each hive, besides the cost of raising the brood, and the value of the workers that might have been raised instead. I will guess, till some one gives me reliable information, that it takes two pounds of honey and pollen to carry one thousand young workers through their first ten days.

The average weight of my stocks, deducting hives, honey taken, &c., was 48½ lbs. on the 8th of August, and 37½ lbs. on the 24th of that month. On the 16th of November, when they were put in the cellar, they weighed 25 lbs. each. On the 29th of January, I weighed two hives, the lightest and the heaviest, and found they had lost 4½ lbs. each, or sixty-eight ounces in seventy-four days. The honey-boards were raised one-fourth of an inch on small blocks, and the entrance holes stopped with cotton.

According to A. Brown's account of Wintering Bees, in the BEE JOURNAL, vol. 3, page 225, his bees consumed in the cellar from 100 ounces to 268 ounces in 120 days, or from one to two and a half ounces per day. The amount over one ounce a day, was probably used in February and March, in raising brood. Now if any observer can tell how much brood his bees had in February and March, till they were set out, counting fifty to the square inch, and how much they lost in weight more than in the first half of the winter, we could calculate very accurately what a thousand young bees cost.

Last year, March 7th, my frame hive had 300 brood, some capped over when I set them out. April 20th, they had no eggs or brood of any age. They had lost two ounces a day from Feb. 13th, or 8½ lbs. in sixty-seven days, leaving 11 lbs. in hive. On the 1st of May, when eleven days out, they had 1,300 bees capped over, showing that liberty hastens breeding. If it takes two pounds of honey to a thousand, a hive that has 30,000 brood in the comb when they swarm, as some have, besides as many

previously hatched, to make two stocks, they must have used 120 pounds, perhaps half pollen. When the amount is known, we can judge better how long to set our bees out, before we expect them to find honey—according to the weight of hive, and what we could afford to feed.

HENRY D. MINER.

WASHINGTON HARBOR, WIS.

[For the American Bee Journal.]

A New Style Langstroth Hive.

MR. EDITOR:—Several correspondents, in the JOURNAL for April, describe hives which they have devised, claiming for them a large amount of room for surplus honey boxes. Now I have a new style of the Langstroth hive, (I call it the Langstroth hive, because I use the Langstroth movable comb frames in it,) which has as much, if not more, room for honey boxes than either Mr. Quinby's or Mr. Hazen's. At any rate all that is necessary to increase the box room to any desired extent, is to make the cap large enough to cover all the boxes that can be placed about the brood chamber. I have so arranged the frames that the boxes, when in, are only three-fourths of an inch from the brood comb; and, by removing the honey-board, they can be placed half an inch nearer the brood, thus giving the bees a clear passage to them.

The hive is simply this—a brood chamber seventeen inches deep by fourteen inches from front to rear, and nine inches from side to side, is placed on a movable bottom board. The boxes are placed on the sides of the brood chamber; and, if desired, can be placed on the top also. The frames run crosswise of the hive, and not from front to rear, as they do in all other movable comb hives. As the boxes are on the sides of the hive, it will be seen that when the bees return from the field, they will not have to crowd up through the combs to reach the boxes, but can pass up the sides of the hive, and enter any box they wish to. I use thirty-six three pound boxes on this hive at one time, and place them only on the sides. I consider that this number of boxes is enough for a stock of bees at one time, and do not use any on the top, as the full ones can be taken off and replaced by empty ones.

This hive winters bees well on their summer stands; and, as it is double, it needs no protection from the weather, summer or winter. Bees in this hive did not cluster on the outside during the hot weather we had at the last of June and the first of July, last season.

I will not describe this hive more minutely now; but will do so at some time when I have cuts to illustrate it.

H. ALLEY.

WENHAM, MASS.

There is scarcely a village in the country that might not readily keep as many hives of bees as there are dwelling houses in it.

[For the American Bee Journal.]

Dysentery, or No Dysentery.

I see in the February number of the BEE JOURNAL, page 145, friend Gallup's article on the prevention of dysentery. He starts out by saying that his bees never have "dysentery;" and that he has come to the conclusion that there is no such disease. Here, he thinks, friend Puckett will say—"that is more of Gallup's buncom." Now friend Puckett does not say so, but he does say that it is a small squib of Gallup's "gas," mixed with a thin slice of his "nonsense." Let us see what there is in his article. He says dysentery is not a disease, "but a condition of the hive or swarm." Well, suppose it is, if the "condition" of the swarm is not the disease, it may have something to do with producing it. It makes no difference what produces it; it is nevertheless a disease after it is produced. Friend Gallup says it is not a disease, and then gives the remedy. He states that his bees used to have it twenty-five or thirty years ago, but "they know better now." Of course his bees "know better" than to have any disease; but that does not prove that three is no such disease as dysentery. May not other people's bees, not so well trained as friend Gallup's, have the disease? Was it a "disease," twenty-five or thirty years ago, before friend Gallup's bees learned to "know better?" Well, if so, may it not be a disease still amongst bees that have not the scientific knowledge that friend Gallup thinks his bees have acquired? A late swarm that has thin watery honey, he thinks may have dysentery. Where did the late swarm get the thin honey. Is not an early swarm just as liable to gather such honey, if it is secreted in the flowers? Bees do not make honey. They gather it just as they find it in the blossoms, and an early swarm will gather just the same kind of honey that a late one will; and if they partake of it as food, are they not just as liable to have the dysentery as a late swarm, though they may have some good honey, that was gathered in the fore part of the season? And let us suppose such a case. Suppose all the honey that was secreted in the flowers in a whole season was thin and watery (as it was last season,) would it not be apt to give everybody's bees the disease that friend Gallup says does not exist? Of course it would, unless the owners had taught those bees to "know better." The condition of the hive or swarm has nothing to do with the secretion of honey in the flowers. There is no disease either among bees, animals, or the human race, that exists independent of a cause to produce it. A disease of any kind is a condition of the subject, and not a thing.

B. PUCKETT.

WINCHESTER, IND., Feb. 15, 1869.

The principal reason why bees have not been reared in greater numbers in this country, is, the almost total neglect of them, by gentlemen of property.

[For the American Bee Journal.]

Bees in Minnesota.

MR. EDITOR:—I am greatly interested in all kinds of information in regard to bees. I have kept bees here in Minnesota longer, by many years, than any other person, having been engaged in it over twenty-six years; and I have more colonies now than any other person here that I know of, as I am wintering more than two hundred colonies. All these are in well made and painted hives, with movable frames. A large portion of my stock is Italianized, from a queen purchased from Messrs. Langstroth & Son.

I think this a good country for bees to increase in and store honey, when once through our long winters; though from some cause, they have not stored as much surplus honey for three years past, as they formerly did. It is probably owing to some change in the climate, or greater variability of the weather. The fore part of last season was splendid for bees. Mine commenced swarming on the 22d of May, and continued until they had thrown off a hundred swarms by the middle of June. They continued to do well until the dry hot weather parched up all the flowers. Then for a long time they had nothing to work upon but honey dew, till the rains brought out the fall flowers in great abundance. It was then, however, too cold for the bees to do much. Hence a portion of my stocks were quite light at the end of the season, though the remainder had honey enough—such as it was.

Early in June, after the white clover was in full bloom, I noticed that the bees were gathering honey and building comb faster than I had ever known before at that time of the year. I examined the clover and all other flowers near by, in the morning, and found no bees at work on them in the fore part of the day, and but few in the afternoon; and I could follow the bees by their loud humming, when high in the air out of sight, until they reached the oats and willows. There the bees were seen gathering this sweet stuff from the leaves. I climbed up some of the trees and saw, above this honey, on the underside of the leaves any number of plant lice, and supposed they produced the sweet stuff which the bees were gathering. Persons who live several miles from here told me that there was great quantities of it almost everywhere during the hot, dry weather, but when the rains came on it all disappeared.

This honey would granulate in a few days after it was gathered, forming coarse grains, but does not become solid or hard. It is not good, has a sickening taste, and will spoil all the good honey in the hive. It tastes like some of the poorer qualities of sugar from the Indies. I do not know how the bees will winter on it; but as it is about all they have, I am very suspicious of it. I do not know but that it may have something to do with the losses that took place last fall, and fear it may affect the wintering. My bees are very uneasy, and many of them are crawling out and being lost on the ground. It has been the warmest winter we have had since

I have been here. My bees were put away from frost, as we expected it would be as cold as usual; and they have been very warm in spite of all I could do. If they all perish, all well. They cost me but little, as I got them from the woods, and can do the same again.

JOHN A. FORD.

NEWPORT (MINN.) March 9, 1869.

[For the American Bee Journal.]

The Season and Bees in Mississippi.

MR. EDITOR:—I have to report that the last season, in this vicinity, was a poor one for bees, though I cannot complain much. I started with seventeen colonies, and increased their number to about forty, besides getting about four hundred pounds of honey.

My greatest difficulty was with my bees building drone comb. Nearly all my stocks would build more or less drone comb, at all times during the summer; the new swarms, whether natural or artificial, the same as the rest. My queens are all young, and I think prolific. I have increased my swarms in the way Gallup directs, in his article on straight combs in the February number of the BEE JOURNAL, by using division boards and putting one empty frame between two full ones; but still I got nearly as much drone as brood comb. The bees would generally begin worker comb, and build down from two to four inches, and then change to drone comb—nay, would oftentimes begin with drone comb. The strongest swarms built as much drone comb as the weakest, if not more. My only remedy was the free use of the knife, using the comb cut out for the honey boxes. Of course this retarded the work of the bees; but it was better than raising so many drones.

My bees filled only a few boxes, preferring to store in the body of the hive. They would not fill boxes, as in other seasons, although strong in numbers and gathering honey.

An infallible rule, by which beekeepers could compel their bees to build all worker combs, and those all straight, would be worth a great deal of money. I think friend Gallup must try again to fit my case.

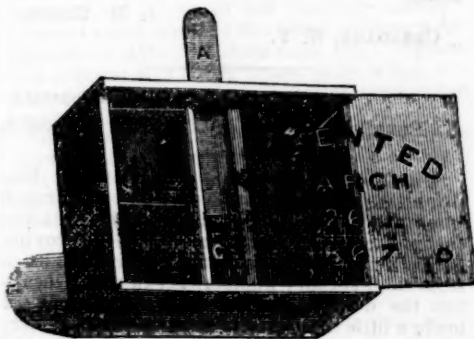
As to straight combs, I will relate my experience, when younger. At that time I was sanguine, and ready to try every new thing that offered in the shape of hives. Among other hives that I tried was one, in which the bees entered at the top; at the ridge so to speak, as it had a double roof like a house. It had no particular advantage that I know of; but I well remember that, in all those hives, the combs were invariably worker comb and straight, and built across the roof the way rafters are placed in houses. This would indicate that frames which come to a point at the top, would secure straight and worker combs, better than any other form. I intend, the coming summer, to make some experiments with this end in view.

J. TOMLINSON.

NEWBURY, MISS.

[For the American Bee Journal.]

J. M. Beebe's Bee Feeder.



MR. EDITOR:—In compliance with many invitations received by letter from readers of the JOURNAL, I will attempt to describe my bee-feeder, as I promised to do.

The illustration represents the feeder with the glass top partly removed. It is composed of a box containing three compartments for furnishing the bees with water, rye flour, and sugar syrup, at the same time. Each compartment is provided with a tin vat movable at pleasure. The vats to contain the liquids are furnished with floats to prevent the bees drowning. C represents a central passage way, through which the bees gain access to the food. A represents a slide door by which the passage way is closed when the feeder is to be filled. D represents a movable glass top, for the purpose of closing the top of the feeder, attracting the bees, and readily discerning when the food is gone.

This feeder is cheap, simple in construction, and may be used on any hive.

Early in spring I feed each colony of bees one-fourth pound of sugar daily, to promote breeding. If their store of honey is light, I feed a little more. They work readily on rye flour, until pollen can be obtained abroad. Bees require a considerable amount of water when they are rearing brood largely. Last season my thirty colonies consumed three pints daily, averaging one day with another, as long as I fed. It will be readily seen that by furnishing bees with water, rye flour, and sugar syrup in early spring, we not only promote rapid breeding, but we save the lives of many old bees, that might otherwise be compelled to go in search of the necessary food, and fall victims to the chilling winds of spring. I am fully confident that by feeding, my bees commence swarming much earlier. I have had my hives so crowded with bees, that they hung on the outside of the hive before the apple trees were in bloom, and drones were flying on the 10th day of May. When feeding is once commenced, it should be continued every day until white clover or other honey-producing plants yield a sufficient supply, or the bees may kill off their drones and even destroy the unmatured brood, which would be a great disadvantage. If any of the readers of the JOURNAL do not fully understand the description given, by writing to

me and enclosing a stamp, by return mail I will try and explain more fully what is not understood.

CASADAGA, N. Y.

J. M. BEEBE.

[For the American Bee Journal.]

A Possible Cause of the Bee Disease.

MR. EDITOR:—I am a reader of the BEE JOURNAL, and also a beekeeper and very much interested in beekeeping. I see by the JOURNAL that a disease or something else is destroying the bees in many parts of the country, and learn from the February number that in many localities the devastation has been very great. I made a little discovery in my bees last summer, which may perhaps throw some light on the subject. Whether it is anything new or not I cannot tell; but this is certain, that I have not read anything written on the subject as yet that furnishes any satisfactory explanation. If you see proper to publish what I have to say you are welcome to do so, and let it go for what it is worth.

I have not suffered materially from the mysterious malady hitherto, but last summer and fall I noticed a good many dead bees around my hives, especially in the morning. I went to examining some of them, and, to my surprise, in the abdomen of almost every bee that I examined, I found a *living* worm or maggot, nearly or quite an eighth of an inch long. The head portion or that part which I took to be the head, was much larger than the rest of the worm. From the head it gradually tapered back to a point. On the largest end, or head, of this maggot there were two very minute black dots, resembling eyes. This maggot is found in the upper part of the bee's abdomen, and by taking the bee in my fingers, and drawing it apart, the worm can be readily detected. When taken out and laid on the hand, it could be seen to expand and contract in a very lively manner.

A beekeeping friend of mine put some of the dead bees in a glass bottle, and in a short time the maggot hatched, producing a fly nearly as large as what is called the Hessian fly—a perfect insect.

Now, does this worm destroy the bee, and if it does, will it not destroy a whole colony, as well as a few bees? In some localities I could not find any of them in the fall, after it became cool enough to prevent the bees from flying. My opinion is that if it would kill a few bees, it might destroy a whole swarm just as well. I incline to believe that the waste of a swarm during the summer months, is occasioned by this maggot, more than by all other causes combined.

Will not the readers of the BEE JOURNAL investigate this matter next season, to ascertain whether this maggot prevails to any considerable extent in the apiaries of the country? I would like to know whether any one else has observed anything of this kind among his bees.

H. B. PHILBROOK.

EAST SANBORTON, N. H., March 15, 1869.

[For the American Bee Journal.]

That Bee Disease.

The first account came in the form of something that looked like a hoax—"Mysterious Exodus of Honey Bees in Kentucky!" But the smile with which all greeted this story has vanished under the array of facts, going to show that throughout southern Ohio and Indiana, and a large part of Kentucky, the bees are almost without exception, dead. Dead, with plenty of honey in their hives, and in the mildest winter known for years.

I have at this time no explanation to offer, not having had an opportunity personally to examine any case of the disease. Our own apiary of Italian bees is untouched by its ravages, while nearly every stock of black bees in this vicinity is dead; but whether from disease or want of stores, it is hard to say.

Last season was in this locality a disastrous one for bees. Owing to a combination of misfortunes, they closed the season without any swarming, with no box or surplus honey, and, in the case of black bees, without enough stores to carry them through the winter. It therefore happens that the black bees are gone, and the honey ditto; and whether they had "the disease" or not, no man knoweth.

For many weeks we received daily letters of inquiry in regard to the disease, from those whose bees were attacked, but could give no remedy, not knowing the cause. The symptoms, as described, varied a great deal in different cases; but a summing up of the whole prevents me from subscribing to the "old age" theory as a complete explanation. I think that theory tells about half the story.

Many of the accounts received speak of the Italians as partially exempt from the ravages of the disease. Our own, as above stated, have escaped entirely, while we learn this spring that on every side of them the black bees are gone, in some cases leaving considerable honey in accessible parts of the hive. Your readers will be interested in reading the following extracts from a letter dated February 19, from E. L. Grant, of Boone county, Kentucky:

"In my county there were perhaps fifteen hundred stands of black bees, and as far as I know not one of them has lived up to this date. In sight of my house were last fall seventy-five stands of black bees, every one of which is now dead.

"I had a large stand of black bees in fine condition, in the fall. It perished, leaving about twenty pounds of honey. I had the only stand of Italians in the county. My Italian stand is in fine condition, briskly at work every fine day, carrying in pollen; and I am fully convinced that the Italian is 'the Bee.'

If the Italians have generally, as here, and in the case of Mr. Grant, withstood the disease and refused to join in the "mysterious exodus," we have another recommendation for them. What is the experience of others having them in the infected district?

J. T. LANGSTROTH.

OXFORD, OHIO, March 10, 1869.

[For the American Bee Journal.]

Items of Various Kinds.

THE BEE DISEASE.

That bee disease, so far as my knowledge extends, has not appeared in Canada, and I hope it will not, as we have already sufficient drawbacks to beekeeping. Having never seen anything of the kind, I am quite unprepared to say what the cause is, or what the remedy. However, I cannot believe it to be poisonous honey, scarcity of honey, or barrenness of queen. Why should poisonous honey, such as could cause the disease, have been gathered for the first time last season? Scarcity of honey and barrenness of queen are contingencies too common to be productive of such fatal results. The same may be said of "want of pollen" as the cause. Has there never been a want of pollen before? Why should this want occur last season? Were not flowers as abundant as in other seasons, and as productive of pollen, even if not of honey. Neither can I accept my friend Dadant's "probable cause"—constipation; that is, if constipation is produced, as he is inclined to believe, "by a sudden and great fall of temperature, while the abdomen of the bees is filled with feces." Do we not frequently have as great and as sudden a fall of temperature, as was experienced last September? It appears to me that the true cause of the disease has not yet been arrived at.

FOULBROOD.

I know of but one apiary in the Province of Ontario, where foulbrood exists. There may be others, but not to my knowledge. This apiary is owned by Mr. Thayer, of Georgetown. In the fall of 1867, being in that vicinity, I called on Mr. Thayer, and with him examined several stocks of bees, two of which were badly affected with foulbrood. I tried to induce him to destroy the hives and stocks entirely; but he being unwilling to do so, I cut out all the affected combs and left the stocks to live or die. Mr. Thayer had I think at that time some fifty stocks. I cannot say whether others were affected or not, or how far the disease had spread among his bees, not having heard from there of late. Mr. Thayer now takes the BEE JOURNAL, and it is to be hoped that he will see to it, and rid his apiary of the disease.

CANDIED HONEY.

Friend A. J. Root, in the current volume of the BEE JOURNAL, page 179, thinks that candied honey, after being melted by submitting it to a temperature of 206° F., will not candy again. My experience has been that it will. If Mr. Root will put his honey into jars, and then bring it nearly to a boiling heat, and seal it up as fruit is sealed, it will not candy. At least, I have kept it thus for two years, as clear and fine as the day it was sealed up.

QUEENS LAYING DRONE AND WORKER EGGS.

On page 198, of the current volume of the BEE JOURNAL, Mr. Dadant says—"I think

that the queen finds less enjoyment while laying in drone than in worker cells; and that she lays in drone cells only when compelled by want of room, or when hurried by the desire of laying in the height of the breeding season." I do not know whether the queen finds any enjoyment in laying in drone cells, but I do know that a queen will lay in drone cells when not compelled by want of room, and this not in the height of the breeding season.

In reply to Mr. R. Bickford, in the BEE JOURNAL of February, 1868, page 147, I submit that if the queen lays in worker cells because she understands that by so doing she will produce a worker or female progeny; then she lays in drone cells because she understands that by so doing she will produce a worker or male progeny. Logical conclusion. The same understanding that causes her to lay in worker cells, in order to produce workers, would cause her to open the mouth of the seminal sac, in order to produce fertilized or *worker* eggs; and when laying in drone cells, in order to produce drones, would cause her to close it, in order to produce unfertilized or *drone* eggs. It can require no more knowledge to open and shut the seminal duct, than it does to open and shut the oviduct.

Again—if the queen instinctively lays in worker cells, then she instinctively lays in drone cells. Logical conclusion. The same instinct that causes her to lay in worker cells, in order that workers may be produced, would cause her to open the mouth of the seminal sac, in order that impregnated or *worker* eggs may be deposited; and, when laying in drone cells, it would cause her to close the mouth of the seminal sac, in order that unimpregnated or *drone* eggs be deposited. If instinct causes the oviduct to open and shut, it may cause the seminal duct to open and shut. Ye wise ones, either deny the premises, and say the queen does not lay at all, or accept the conclusion.

J. H. THOMAS.

BROOKLIN, ONTARIO.

[For the American Bee Journal.]

MR. EDITOR:—R. Bickford's troubles, described in the February number, have induced me to send you my plan of getting bees out of honey boxes.

Place an empty barrel anywhere about the apiary to suit your convenience. Remove the boxes from the hives, and place them in it; then lay a dark cloth over the top of the barrel, leaving a space at one side just large enough for one or two bees to crawl out at a time. You may then leave for other work, and return at your leisure, without fear of finding any honey carried away by robbing bees.

I have tried this plan several years, sometimes placing a dozen boxes in a barrel at one time; and never yet knew a bee to return to the barrel for honey, or a cell to be uncapped by its own or other bees.

If any one has a cheaper, quicker or easier way, that is not patented, I should like to hear of it.

JOHN L. RICE.

RENSSELAERVILLE, N. Y.

[For Our American Bee Journal.]

Facts for Bee Men.

In the Report of the Commissioner of Agriculture for the year 1863, page 539, R. Colvin says:—"It should never be lost sight of that, although the *drone* progeny of a queen reared from a pure Italian egg, but impregnated by an impure or even native drone, may be pure Italian, (which is now considered by Europeans, as well as many American breeders, as an established fact)." Now, I do not agree with R. Colvin, L. L. Langstroth, and others, that a queen thus impregnated, can produce any pure progeny, either male or female. I tried that process several years ago, until I was satisfied they did not produce pure progeny.

Nor do I believe in the doctrine that the size of the cells has anything to do with the fecundation of the eggs, by pressure. As the queen backs into the the cells, to deposit her eggs, I have frequently seen her depositing eggs in cells just commenced; eggs sticking out as far as the edge of the cells. There can be no pressure of her abdomen at all. Those eggs thus laid in worker cells, invariably hatch workers.

I would advise all who wish to keep their bees pure, not to breed from drones whose mother is impurely fertilized.

Bees can be improved by careful breeding, as well as any other stock. Whilst at Kelley's Island, raising queens in 1866, I commenced by picking out of the first lot of queens hatched, one queen. She was very large and light-colored. After she had deposited eggs six days, I removed her and let her bees construct queen cells from her eggs. When they were capped over, I cut them out and inserted them in nuclei. When they hatched, I picked out the largest and lightest-colored again, and so on until I had raised the eighth generation that year. In 1867, I raised five generations, and in 1868, five more—making eighteen generations in three years.

Most of the queens thus raised I put in my own hives at home and others in the vicinity; so that I could test them and pick out the best each year to breed from. By careful breeding I have succeeded in producing very large and light-colored bees. When we take the same pains in breeding our bees, that the Vermonter does in breeding his sheep, we will find that we can put yellow bands on them, as easily as he can put wrinkles on his sheep. I am in for improvement.

Small bees are more apt to sting than large ones.

AARON BENEDICT.

BENNINGTON, OHIO.

A large swarm of bees may weigh seven pounds, and others gradually less, to one pound. Consequently, a very good swarm may weight five or six pounds. All such as weigh less than four pounds, should be strengthened, by uniting to them a less numerous swarm.—WILDMAN.

[For the American Bee Journal.]

Reply to Mr. J. H. Thomas on the Purity of the Queen.

In contradiction of the theory of Mr. J. H. Thomas, as given in the March number of the BEE JOURNAL, and which seems to mean that all queens whose workers have three rings, have mated with pure drones; I maintain, as I have already stated in the September number of the JOURNAL, that *color alone is not sufficient* to establish the purity of the queens; but that the slender form, the tapering abdomen, and the thick greyish hairs around the abdomen are necessary also.

No doubt friend Thomas has only purely impregnated queens in his apiary; at least he thinks so. But there are in his vicinity some careless bee-keepers; let us suppose that one of his pure drones mates with a black queen; the progeny will be half-breed. If that half-breed progeny mate with a pure drone, the daughters will be three-fourths Italian, and so on. Then let one of these three-fourth Italian drones mate with one of his pure Italian queens; does friend Thomas have eyes keen enough to detect the change, if he relies only on color? His three-banded seven-eighths Italian bees will no longer be pure in the full meaning of the word.

The first importers of Italian queens committed a serious mistake, in importing German bred queens, and in looking only at the color. For, notwithstanding their golden hue, so much loved in Germany and so loudly extolled here, I claim that most of the German bred queens, used as breeding stock, are more or less tainted with *black* blood, because in shape the workers are not all alike in all the hives, and their form is very different from that of Italian imported bees.

Furthermore, the best queen breeders in Italy, living at the foot of the inaccessible Alps, cannot meet the light color so fashionable in Germany. Their endeavors in this direction are always frustrated by the drones of their neighbors, and their bees invariably revert to the typical color, such as was known and sung by Virgil two thousand years ago.

CH. DADANT.

HAMILTON, ILLS.

[For the American Bee Journal.]

The Bee Disease.


I have noticed, in emptying the hives in which my bees died last fall, that the honey in the lower uncapped cells was very thin and watery. My bees also obtained honey from a so-called honey dew last summer. But bees north of me did the same, and have not died. Can this disease be connected with the fact that the bees cast no swarms during the season?


C. E. THORNE.


SELMA, OHIO.


THE AMERICAN BEE JOURNAL.


WASHINGTON, MAY, 1869.

 THE AMERICAN BEE JOURNAL is now published monthly, in the City of Washington, (D. C.,) at \$2 per annum in advance. All communications should be addressed to the Editor, at that place.

 We have added four pages to this number of the JOURNAL, without being able to insert all the articles now in hand. Regarding the favors of our correspondents as evidence that the interest felt and frequently expressed by them for the success of the BEE JOURNAL, is sustained and growing, we make every effort in our power to present their communications to our readers without undue delay, but find that we cannot always accomplish what we constantly desire.


 Our readers will find in this number of the BEE JOURNAL, interesting communications from correspondents in Germany, England, and the Canadas; besides the usual number and variety of contributions from practical bee-keepers in almost every part of the United States.

 If the process of securing the pure fertilization of queen bees announced by Dr. Preuss, as detailed in the present number of the BEE JOURNAL, proves efficient, as we presume it will, another important advance in operations essential to successful bee-culture, will have been achieved. It comes in season to be availed of by those engaged in queen-raising, who, we trust, will communicate the result of any trials they may make.

 In our present issue we give a further sketch of the debates in the German Bee-keepers' Convention at Darmstadt, last fall.

The process for introducing queen bees promptly and safely, used and recommended by Mr. Uhle, deserves trial as that of a bee-keeper of large experience. The *Bienenzeitung* of March 15, contains an extract of a letter to Mr. U., in which the writer states that he had tested the process, with success, in the following man-

ner: On the 7th of August he removed the queens from two colonies of black bees, A and B. After feeding each colony with a wine-glassful of diluted honey scented with grated nutmeg, he dipped each queen repeatedly in the liquid, and gave the queen from colony A to colony B, and that from colony B to colony A, setting each at liberty directly among the bees. Next morning he found each queen hale and hearty in her new home, and engaged in laying eggs. He then caught and killed both, and substituted for them two Italian queens dipped in the scented liquid and immediately liberated them among the bees, as before. This second experiment was quite as successful as the first. The process may thus be tested, without risking the life of a valuable queen.

 We have received several numbers of the "*Journal des Fermes et des Chateaux*," a new periodical recently commenced in Paris, and largely devoted to improved and rational bee-culture. It is well edited, and cannot fail to be serviceable to the accessory branches of rural economy which fall within its plan.

We have received a specimen of "*L'APICOLTORE*," an Italian Bee Journal, published monthly at Milan, by the Central Association for the Encouragement of Bee-culture in Italy. It advocates the introduction of movable comb hives, and the advancement of bee-culture by the adoption of a rational, scientific, and systematic mode of managing bees.

No. VI of Dr. Packard's "*Guide to the Study of Insects*," has been published, concluding the account of the Lepidoptera (butterflies, moths, &c.) and the beginning of the Diptera, including the various species of flies of this country. This number contains a full page steel plate and numerous illustrations on wood, well executed. Four numbers more will complete the work. It is published in parts, at fifty cents each. Send orders to Dr. A. S. Packard, Jr., Salem, Massachusetts.

The "itemizers" sometimes misapprehend matters strangely, and present their misconceptions very absurdly—as witness the following, now "going the rounds:"—

"It is stated that a swarm of bees to the num-

ber of fifty can be packed into a sponge saturated with honey and safely transmitted from one point to another through the mails. If a mail robber should chance to open one of these packages without being aware of its nature he would soon be taught a stinging lesson."

Michigan Bee-keepers' Association.

Pursuant to notice a large number of bee-keepers met at Jackson, Michigan, on the 7th of April last, to organize a State Association, and to discuss questions of interest to those engaged in bee-culture. The following named gentlemen were chosen officers for the ensuing year, viz:

President—Ezra Rood, of Wayne.

Vice Presidents—J. H. Townley, Tompkins; Rev. J. G. Putman, Dowagiac; A. Harwood, Maple Grove.

Secretary—A. J. Cook, Lansing.

Treasurer—R. G. McKee, Lansingburg.

Executive Board—Martin Metcalf, Grand Rapids; A. F. Moon, Paw Paw; C. L. Balch, Kalamazoo; — Hoff, Jonesville; — Tyler, Detroit; O. E. Wolcott, Byron; G. Smith, Lexington; — Hastings, Cass county; L. Foster, Ann Arbor; J. T. Rose, Petersburg.

The Convention continued in session two days, and a number of questions, proposed by a committee, were discussed; but no regular report of the proceedings has been furnished to us.

[For the American Bee Journal.]

The Season of 1868.

Bees did very poorly here last season. I had fifty hives last spring, all in good condition; and the prospect early in the season was very good. I had drones flying on April 15th; and while the crab apples were in bloom, most of the stocks stored more or less honey in the surplus boxes. But, after the crab apples were done blooming, bees almost ceased to work, and killed off their drones in a few days. White clover was tolerably plenty, but I could scarcely ever find a bee on it. I did not have a single swarm, and did not get over a hundred pounds of honey.

C. T. SMITH.

TRENTON, ILLS., March 24, 1869.

Bonner says—"I have often had good hives, with few or no drones in them, during the whole year.

[For the American Bee Journal.]

The Truth of the Dzierzon Theory.

MR. EDITOR:—I see on page 90 of the BEE JOURNAL for November, 1869, that Mr. J. H. Thomas, of Brooklin, Canada, claims that the Dzierzon Theory of the reproduction of the honey bee is not true, and says that Mr. John Lowe, of Edinburgh, raised from an Italian queen, fertilized by a common drone, workers and drones which he called hybrid in their character, and which bore unmistakable evidence of the influence of the male parent. Mr. Thomas fully endorses the conclusion arrived at by Mr. Lowe, that drones are, in some way, affected by the act of fecundation.

My experience is different from that of Mr. Lowe and Mr. Thomas. In the year 1865 I had two black queens which were fertilized by Italian drones. Their worker progeny was handsomely marked in part, and the remainder was black bees. When the drones made their appearance, I examined them to see whether they bore Italian marks. I suppose I have caught hundreds of them for examination, and found not one that showed the least indication of Italian blood. I also caught drones from other stands, and laid them side by side, for the purpose of detecting a trace of Italian blood, if any could be observed; but could perceive nothing warranting such an inference.

Now, Mr. Editor, I have in my possession the first volume of the BEE JOURNAL, published in Philadelphia in 1861, containing an article in which the Baron of Berlepsch states that among twenty common queens raised in his apiary and fecundated by Italian drones, which produced a more or less mixed worker progeny, there was not one drone bearing the slightest resemblance to the characteristics of an Italian drone, all being thoroughly of the common race.

Hence I am forced to believe the theory of Dzierzon will stand, in defiance of all investigation of the subject.

In conclusion, allow me to ask Mr. Thomas if he will tell me how many black queens he has raised, that were fertilized by Italian drones, whose drone progeny, as well as the workers, show positive marks of the Italian blood?

H. ROSENSTIEL.

LENA, ILLS.

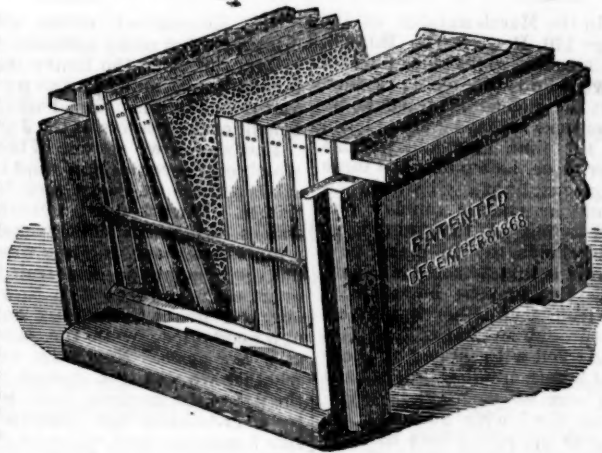
A swarm of bees and a bountiful store of wild honey were recently found in a tree by wood-choppers on the west side of the Sierra Nevada mountains. The incident is recorded as the first discovery of the kind on the Pacific slope. There were no wild bees beyond the Sierras when that portion of the country was first occupied by emigrants from the Atlantic board; but it was soon discovered that bees imported from "the States" thrived well, and several persons who engaged early in the business acquired large fortunes from the production of honey for the markets.

It cannot be denied that bees have their *vices*, as well as their *virtues*.—BONNER.

[For the American Bee Journal.]

A. P. Durant's Patent Hive.

The hive represented by the annexed cut is the most simple and the easiest managed of any that I have ever seen. I think it is perfectly adapted to persons handling bees. I used it last season, and found it far ahead of my expectations. It is so arranged that I can take out the frames without injury to the bees or combs, by loosening the iron rod a little.



The side board is loose, and comes any required distance, or can be taken off entirely. The frames are rabbeted at the lower end, resting on a shoulder or a crossbar.

I make my frames 10 inches deep and 15 inches long. I am not confined to any particular number of frames with this hive. I make my bottom board wide

enough to receive frames for a large stock of bees; or, if my swarm is small, I use fewer frames. I put a frame on the top, to receive honey boxes. This frame and the cap are not shown in the cut.

I see, in the April number of the BEE JOURNAL, that Mr. Quinby has got up a hive in which the principle of handling the frames, if I understand it, is the same. The first hive I got up, I set the frames on the bottom board. I do not like that as well as setting them on the crossbar, as shown in the cut. The bottom bar of my frame is three-eighths of an inch from the bottom-board.

I see that some do not like a patent hive. Very well, I cannot help it now. The thing is done and gone. I obtained a patent on this hive December 8, 1868, number 84,805. What I claim as my invention is, Bottom-board A, Bars B B, Frames C D, Side-pieces E F, Connecting-bars G G, Frame H, Cap I; all constructed and arranged substantially as set forth.

Inquiries from readers of the BEE JOURNAL, concerning this hive, will receive due attention and prompt answers, if addressed to

A. P. DURANT,
ATHENS, OHIO.

April 10, 1869.

[For the American Bee Journal.]

The Native Honey Bee of Australia.

I see that on page 110 of the AMERICAN BEE JOURNAL are quoted two lines from the *New York Tribune*, to the effect that "in Australia the bees are as large as horse-flies, and do not sting." This seems ridiculous enough, but I have no doubt that the remark is intended to apply to the native honey bee of that country, and that its apparent absurdity arises entirely from misprint. If we bear this in mind, and substitute *house-flies* for "horse-flies," the absurdity vanishes, and the information conveyed becomes moreover perfectly correct. It is a curious fact that the apparently powerless Lilliputians are stated to be quite capable of holding their own, and even of successfully defending their nests against what might well be considered an irresistible attack of the comparatively gigantic and well-armed European bee, which has been introduced by the colonists, and which has flourished and extended itself through the land to an almost unprecedented extent. Their mode of defence is described as being summary and effective, although their tactics may be

deemed simple in the extreme. They merely grapple with the huge intruder, bite off her wings and legs, and in this helpless condition thrust her out of the nest!

In September, 1863, I received a beautiful nest of these remarkable insects, the scientific name of which is *Trigona carbonaria*, and which nest is now deposited in the British Museum. Its inhabitants were alive when shipped from Brisbane, but had unfortunately become defunct long before the conclusion of their voyage.

If wished by the Editor of the AMERICAN BEE JOURNAL, I shall be happy to forward a copy of an interesting description of this nest and its architects, from the pen of Mr. F. Smith, the distinguished hymenopterist, who was at that time President of the Entomological Society, and who is at the head of the entomological department of the British Museum.*

T. W. WOODBURY,

("A Devonshire Bee-keeper.")

MOUNT RADFORD, EXETER, ENGLAND, December 21, 1868.

*We shall be pleased to receive the description referred to above.—ED. A. B. J.

[For the American Bee Journal.]

Improved Method of Swarming.

MR. EDITOR:—In the March number of the BEE JOURNAL, page 170, Rev. P. R. Russell, of Bolton, Massachusetts, gives his plan of swarming, which would do very well, provided his bees would start the queens from eggs deposited each on successive days. But I am afraid that about the time he would get his swarm from number three, he would have three if not twice three queens hatch, all within an hour perhaps. Could he change number one from stand to stand so fast as that, and have bees return from the fields too to make new swarms? My opinion is that he could *not*, and his plan would fail. But suppose he *succeeded* in getting a swarm from each of his ten hives, by the time he got through swarming his number one would be so filled with honey by these returning bees, that before number one raised a queen, she would have no room to lay eggs. Every cell would be filled with honey in the brood combs, as fast as the young bees hatched out.

I do not want Mr. Russell to think that I am criticising his plan from any ill will; but that I do so lest some new beginners should be led astray, and, failing at the very start to accomplish all they aimed at, be induced to abandon bee-keeping as a poorly paying business—as many of our Kentucky bee-keepers are doing, because their bees died this winter. To such I would say, try it a few years more; do not become disheartened. Suppose we farmers had quit farming two years ago, because we raised only six or eight bushels of wheat or twenty bushels of corn per acre, where would we get our fat Durhams, our fat Berkshires, or old Bourbon? But, for fear some temperance bee-keeper should say my head is swimming, and that I am going too far from the subject, I will give my plan for swarming, and let Mr. Russell and others judge which is the best.

I propose to make an artificial swarm from number one, taking away two-thirds of the bees and combs to a new stand; but leaving the old queen on the old stand, to superintend comb-building and prevent too much drone comb being built. Nine days after this division, examine the new swarm and if there are ten queen cells sealed, cut out nine and make a division of each of the old hives, same as number one—giving to each new swarm a sealed queen, which will hatch in a day or two. All will go well, provided all the queens are successful after their excursion to meet the drones.

This is intended for those using movable comb hives, as it is supposed that no one who is *old foggy* enough to use the old box hives, would try anything new.

H. NESBIT.

CYNTHIANA, KY., March 10, 1869.

P. S. Why do not correspondents *date* their articles, as some without date look *out of season*?

Do stinging bees, losing their stings, die?

[For the American Bee Journal.]

The Honey-Emptying Machine.

MR. EDITOR:—I notice while reading the JOURNAL, that many apiarians are writing much in favor of using the honey-emptying machine for getting surplus; and as we have had a little experience in that line, I will give it for the benefit of the readers of the JOURNAL.

Last season we got one of the machines made which cost seven dollars, and extracted a thousand pounds of very nice honey from the frames. It worked like a charm, emptying two frames, weighing eight pounds each, in four minutes after the capping was removed. We put the honey up in glass fruit jars, holding one quart each, and sent it to New York city, with our box honey. The box honey sold readily, at a good price; while the jars went *very slow*, at a low price. Now, the question is this—whether we can get enough more honey, by the use of the machine, than we can in boxes, to over-balance the difference in price and sale?

We shall use it for emptying combs that we wish to use empty; but not for getting surplus.

The winter has been long, having had but one day that the bees could fly out, this spring.

A. A. BALDWIN.

SANDUSKY, N. Y., April 7, 1867.

[For the American Bee Journal.]

Several Inquiries.

My bees are in hives piled in tiers, one above the other, in a not very dry cellar, with mats over them. I noticed, in raising the mats, that drops of water had collected on the underside. If the bees should partake of it, would it be injurious to them? Or would it answer the demand some writers make for bees in winter? I notice, too, that my bees are not in a healthy condition, from some cause. From the smell, I should judge it was foulbrood. If there are healthy stocks in the same room, will they become diseased by contagion? Perhaps some experienced bee-keeper will answer, and oblige

J. F. H.

[For the American Bee Journal.]

Albino Queen.

From an Italian queen bee purchased from Mr. Langstroth, I raised a queen, in the summer of 1867, that showed *white* instead of yellow rings. The *upper* half of every ring the whole length of her abdomen was *white*—the *lower* half as *black* as a crow. She was large, and appeared perfect in form. After repeated excursions, she was lost.

Could this queen have been internally deformed, or did her peculiar color deter the drones from mating with her?

H. NESBIT.

CYNTHIANA, KY., April, 1869.